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Two Family and Twin Houses

New York
WILLIAM T. COMSTOCK
23 Warren Street

#2 KG838

Two-Family and Twin Houses

Consisting of a variety of designs contributed by leading architects in all parts of the country, showing the latest ideas in planning this class of dwellings in city village and

Errata

Page 19.—First line last paragraph "two family" should be "three family."

Page 20.—First line second paragraph "on pages 94 and 95" should be "on pages 118 and 119."

Page 31.—Last line third paragraph from bottom "Henry A. Hagan" should be "Henry H. Hagar."

Page 34.—First line fifth paragraph "The house on pages 118 and 119" should be "The house on pages 94 and 95."

Selected and Compiled by the
Editor of the "Architects' and Builders' Magazine"

NEW YORK
WILLIAM T. COMSTOCK
23 WARREN STREET

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Preface

In presenting this collection the editor has had in mind the large demand for improved house accommodations on comparatively small lot areas and has endeavored to collate designs from all parts of the country, representing the handling of the subject by practicing architects in their efforts to meet the needs of their clients in this respect.

As will be seen by a review of these designs, the planning has called forth much ingenuity to cover at the same time, the requirements of limited lot areas, ample accommodations and as complete isolation of families as possible.

This last matter of isolation has been met more or less perfectly in accordance with the width of lot front at the disposal of the architects, but even in narrow lots, the personal ingenuity of the architect has counted largely.

It will be seen that in the city houses erected in blocks, less has been accomplished in this respect than in the case of buildings on village lots.

In fact, one might be inclined to feel that the architect dealing with city property has been less skillful than his brother of the village or town, were it not that in the large apartment houses, one sees so many examples of ingenious and inventive planning. It seems rather due to lack of effort than to lack of skill that better designs are not offered for the two family house in city blocks.

The great number of houses of this class that are being erected in The Bronx, Brooklyn and elsewhere in the immediate vicinity of New York, call for special effort in improving both accommodations and isolation in which they, as a rule, fall far short of similar buildings in the smaller cities.

A comparison of these plans with those usually adopted in New York and Brooklyn, ought to suggest many improvements not necessarily involving large cost, but greatly enhancing the value of these residences.

To the preparation of this work, much time and correspondence has been devoted. For such success as has been made in bringing together designs of interest, we have to thank the many architects who have given us the use of their recent work and lent us their kindly aid in this matter.

A list of the contributors is given, and the name of its architect appears on each design.

Trusting these efforts may be found useful to our readers we leave it in their hands.

THE EDITOR.

NEW YORK, October 15, 1908.

Architects Who Have Contributed to This Work

AUSTIN, FRANK LYMAN..... 240 College Street .....Burlington, Vt.
BAECHLIN, HENRY..... 45 Clinton .....Newark, N. J.
BAILEY, C. JEROME.....63 Bank Street .....Waterbury, Conn.
BALL, JAS. T..... 11 Wareham Street .....Boston, Mass.
BROWN & VON BEREN.....865 Chapel Street .....New Haven, Conn.
BENEDICT, EDWY E.....51 Leavenworth Street .....Waterbury, Conn.
BENNETT, THOMAS.....5123 Third Avenue .....Brooklyn, N. Y.
CORWIN, A. B.....Roe Building, B'way and Pine St. .....St. Louis, Mo.
COBB, ALBERT WINSLOW.....34 Oliver Street .....Boston, Mass.
CRONE, D. A.....Conestoga Bldg., Wood & Water Sts. .....Pittsburg, Pa.
DAVIS, ALBERT E.....258 E. 138th St. ..Borough of The Bronx, N. Y.
DAVIS, EDWARD L.....Davis Building .....Schenectady, N. Y.
EVERETT, A. F. N.....English-American Bldg. .....Atlanta, Ga.
FRENEY & JACKSON.....51 Leavenworth Street .....Waterbury, Conn.
GRIGGS & HUNT.....51 Leavenworth Street.....Waterbury, Conn.
KENNEDY, J. SARSFIELD.....44 Court Street .....Brooklyn, N. Y.
KINGSTON, JNO. P.....518 Main Street .....Worcester, Mass.
KIESSLING, HOMER....4320 Washington St. (Rossindale).....Boston, Mass.
MULLER, G. P. (Builder).....Bedford Park .....The Bronx, N. Y.
MILLER, A. F.....P. O. Box 728 .....El Paso, Tex.
MCCLURE & HOLMES.....135 E. Bay Street.....Jacksonville, Fla.
NAUGLE, H. M.....731 S. Cleveland Avenue .....Canton, Ohio
NICHOLSON, A. E.....Cor. George and Edmund Sts. ....St. Catherines, Ont.
NECHODOMO, ANTONIN ..... San Juan, Porto Rico
PROVOST, D. B..... 78 Broad Street .....Elizabeth, N. J.
POHLMANN, HENRY.....5th Avenue and 49th Street .....Brooklyn, N. Y.
SAXTON, GLENN L.....New Security Bk. Bldg. .....Minneapolis, Minn.
SCHERMERHORN, C. E.....430 Walnut Street .....Philadelphia, Pa.
WILSON & TALBOT ..... Liverpool, England

The Two Family and Twin House

THE multiple house is no new idea, but has been in use from the earliest times. An early form, the tenement house, must have occupied a prominent place in all the ancient as well as later cities.

Frequent reference is made by the historian to the tenement houses of old Rome and the Mediæval cities of Europe, but radical improvement in this class of buildings has waited upon the sanitary legislation of the present era.

The great improvement in the planning of the tenement or the better class of tenement known as "the Apartment" dates back to late changes in the law as to light, air and sanitation.

The two or three family house, for both belong to the same type, has not made the marked advance in our large cities on account of their escaping the strict municipal surveillance of the larger houses.

Under the law a house is a tenement house when it affords accommodation for three or more families, while those of less accommodation rank as private houses. The outcome has been that the speculative builder has put up blocks of these houses, with but little restraint upon him other than the legal requirements for structural strength, plumbing laws and immediate mercantile value.

As a consequence this type of house has been simply an ordinary private house modified slightly to furnish kitchen and bath room for each family.

The hallways, cellars and heating plants have been held in common by the two or three families dwelling in the house. The isolation has been very imperfect and the accommodation much less than is to be found in many apartment houses. The result has been largely a makeshift and far from satisfactory to owner or occupant, whereas better planning and but slight additional expense would have provided separate heating plants, divided the cellar into compartments for each family and left nothing in common but a vestibule, hall and cellar stairway.

This method is well illustrated in a number of the plans of suburban houses shown on the following pages.

The narrowness of the lot is a matter calling for careful handling, but, nevertheless, an ingenious architect should be able to solve the problem, cellar stairs and all.

The opportunities for a diversity of plans are large in the suburban or village house, and these houses have received much attention, and as will be seen by the designs presented, the problem has been worked out in a great variety of ways, from the old-fashioned double house to those separating and dividing the floors between the families and yet maintaining almost all the isolation to be found in separate dwellings.

Admitting that privacy is more difficult to attain in constructing on this model, where high land values narrow down the size of lots, there are decided advantages in its favor. To enumerate a few—it requires but one lot for its site, its cost is but very slightly in excess of a one-family house of equal size and greatly less than two one-family houses of equal capacity, to which should be included the cost of an additional lot in order to justly complete the comparison. In fact, with the conditions ruling in many small cities, the superimposed type of two-family house is the only possible solution of the problem. The twin-house will require at least a fifty-foot lot, and would be better if built on sixty; while it is possible to erect houses divided by floors on a lot as narrow as thirty feet, although this is not advised, as it is detrimental to the free circulation of air, excess of light, and the best architectural effects.

The feature most to be desired in the bi-family scheme of design is the complete separation of the two sets of occupants and the fewer and, if possible, no portions to be used in common, the more satisfactory will be the result. One other feature, however, must not be overlooked, and that is the proper and thorough deafening of the second floor. Neglect to do this will mean the spoiling of an otherwise desirable habitation.

The division by floors may not be the ideal dwelling, but it approaches it, and where the proposition is one of investment, gives much better opportunity for reasonable returns than the single house. While we recognize in the independent house, with its well cared-for grounds, whether it be cottage or mansion, the more satisfactory American home, yet the conditions of life

in our cities and towns are such that the cost of land is too great to afford such dwellings for all and the next step in that direction is the well-planned two-family house.

In looking over these plans it will be noticed that they are titled "Double Houses," "Twin Houses" and "Two and Three Family Houses," and in one case "a Four-Family House." It does not seem to be going beyond the limits set by the title of this book to include three and four family houses as the houses presented belong strictly to the same type.

But to return to the nomenclature adopted, we have endeavored to follow what seems to be the usage of architects. The "Double House" is one where a party wall separates the two sides, while a "twin house" is one where the right and left sides are exact duplicates of the other, and a "two-family house" allows of a great variety of arrangement, and of this type are those of three and four families that are here presented. In this type of house, the apartments may be on separate floors, with or without separate entrances. These floors may be divided among two families as in the case of the houses on pages 64 and 65 by Mr. James T. Ball. This is an example of very complete isolation and yet the family on the first floor has chambers on the floors above, approached by a private stairway, but entirely separate from those of the second floor apartment, while the second floor apartment makes up for the loss of these rooms by having the whole third floor. The rear has two porches, private stairways to second floor and cellar, so that while the rooms are all grouped in a square plan, yet perfect isolation is maintained.

In double or two family houses the provision of separate heating plants, except, of course, where stoves are used, has in the past been difficult. This is now no longer the case, as the use of steam and hot water for residences has called for the manufacture of small plants, which are specially adapted for such houses, and while there might be trouble in providing separate hot air furnaces that would do the work, steam or hot water can do it readily. By their use, each family can control their own heating and be independent in this respect, as if they lived in separate houses.

The question of approach is also an important matter, and as will be observed has been treated in a great variety of ways. Some of the twin houses give excellent methods and the same is true

also of the two family houses. A good example is the corner house on page 43 and of a twin house on page 44. In both cases the approaches are entirely independent.

The arrangement of porches and balconies is another important feature, especially in summer cities or southern climates. On pages 51 and 69, are Jacksonville houses where ample space of this character is provided for both families.

The two family house differs somewhat from the ordinary single house in that it is an investment proposition rather than simply a home and in its construction regard must be had for such general requirements as the usual small family demands.

Description of Designs

IT has been the purpose in preparing this set of plates for publication to give, as far as could be secured from the architects, a brief description of each design, with suggestions that would add to their value, such as the finish, both exterior and interior, arrangement of the heating plant, etc.

It will be found, however, that in some cases little but the drawings and photographs have been furnished, and the design is so evident, that its handling in practical work can be well left to the reader. The first design, presented on page 37, is of a simple Twin House, erected in Waterbury, Conn., after the designs of Griggs & Hunt, Architects, of that city. As will be seen this is strictly a Twin House, that is, the right and left sides are exact duplicates of the other, divided by a party wall. Such a house would be suitable for an ordinary village lot and could be erected either by one person, as an investment, or by two parties uniting in the enterprise with the idea of securing homes, and after its construction the building would stand on the division line and each could hold his own deed for his share of the house and land, and have a property available for rental or sale, as much so as the houses in a city block.

On page 39 is a Two Family House by John P. Kingston, Architect, Worcester, Mass. In this case the division is by floors, and the building, while of considerable magnitude, is suitable for a moderate sized lot, such as are found in our smaller cities.

In this case but one plan is given, as the second floor is suggested by the first.

A study of the first floor plan shows a vestibule and a rear hall, common to both floors, but otherwise very complete isolation of the apartments. The two families have six living rooms on each floor, besides entries, bath rooms, pantry and closets. On the first floor, there is a spacious veranda and on the second floor a covered balcony, and each has a rear covered platform for drying clothes. The rear entry has a place for the refrigerator and

the cellar is separated for each family. The finish throughout is first class is every particular.

The two family house on page 41 is a small but commodious house in which the question of isolation has been well studied. The only portion in common to the two families are the front vestibule and the back entry. The cellar can be divided so that each family has their separate portion. The first floor has a large veranda and the second floor an equally large balcony.

The house on page 43 is by Griggs & Hunt of Waterbury, Conn., and is an excellent design for a corner lot. Here the separate entrances, one on each street, afford very complete isolation, and even at the rear separate entries are provided. The house is a compact structure in appearance and economy of construction.

The design shown on page 44 is by D. A. Crone, Architect, of Pittsburg, Pa.

Each of these houses, in addition to the bath, pantry, cold room, laundry, front and rear porches, front and rear stairs, entrance hall, etc., contains three sleeping rooms on the second floor, and two on the third, kitchen, living and dining-room on the first floor. The closets in each room are large, as is also the linen closet on second floor. The third floor also contains a large store and cedar room. The basement contains the laundry, fruit cellar, furnace room and a large open space, all cemented. The front porches and the terrace are paved with brick laid in herring-bone pattern. The entire first floor is finished in yellow pine, stained dark for all parts except kitchen and pantry, the second floor being enamelled white throughout.

The exterior walls are laid up of three by nine inch dark red "Paver" brick, with very wide white joints, the roof is of light green slate, and the exterior wood work is stained a dark gray, the window sashes being painted a moss green. Each room has a fireplace.

The design on page 45, designed by Mr. Edwy E. Benedict, is a three family house, but, nevertheless, belongs strictly to the type of two family house.

One plan only is given, as the layout of floors is substantially the same. This house would be found suitable for not only an inland city like Waterbury, but also for a seaside resort or a Southern city. While on a small lot, yet the requirements for light and air have been well studied. The veranda and bal-

conies are on the most liberal scale and all floors have equal opportunity for the enjoyment of an out-door retreat in warm and pleasant weather.

The house on page 47 is by Antonin Nechodoma, of San Juan, Porto Rico, and is a good example of a four family house suited for a warm climate. There are ample verandas and balconies front and rear, spacious hall, and stairways, plentiful supply of toilet and bath rooms, making it a very comfortable house for a Southern climate.

The twin house on page 49 was designed by C. E. Schermerhorn, architect, of Philadelphia, Pa. As will be seen, this is intended for a broad lot and ample grounds. As complete separation of the families is secured as though in separate single houses.

The house on page 51 has been erected in Jacksonville, Fla., after the designs of Messrs. McClure & Holmes, architects, of that city, and a study of the design will show that it is well adapted for a Southern city. The large veranda and ample balcony are important features in a climate where so large a portion of the time is spent in the open air.

Another feature is the ample hallways, dividing the house its whole length.

This house is erected of white Sandlime brick, a material largely used in Jacksonville. The color effect is very fine and we understand the cost is about that of ordinary clay brick. As will be seen from the plans the upper and lower apartments have separate entrances, both from the front and at the rear.

The house shown on pages 52 and 53 is by Albert Winslow Cobb and was erected on the seashore at Winthrop Highlands, Mass. The second floor suite and front part of the third floor were built for occupancy by the owner, while the rear room of the third floor went with the first floor suite.

The heating is by hot water, a separate heater for each family. The verandas and balconies are enclosed with glass for sun-rooms in winter, while for summer the glass is removed and they are screened.

The location of this house is especially fine and affords superb views of Massachusetts Bay, Revere, Lynn, Swampscott and Nahant. This house cost to erect $7,000.

The building shown on page 54 was designed by D. A. Crone of Pittsburg, and was erected in Wilkinsburgh, a suburban town

adjacent to Pittsburg, Pa. It was planned for a corner lot. The principal feature about this two family house is that it has a separate entrance and porch for each apartment, both of these porches and entrances being on the ground floor instead of being piled one on top of the other, each being placed on the plan so as to be entirely independent of the other. Each floor contains entrance hall, dining-room, living-room, kitchen, pantry, rear porch, bath, etc. The sleeping quarters are entirely cut off from the rest of the house by a short hall. The dining-room is reached through the pantry, yet to reach the front door one can also come through the rear hall. In most cases the fireplaces, windows, doors, etc., have been "centered" in order to give the best vista through the openings and to make a natural and consistent arrangement. The street on one side has a considerable grade which makes it possible to place one servant room in basement, the servant's room for second apartment being above the second floor. The cellar is cut in half, each apartment using its share, and each apartment having its own hot air furnace and laundry.

The house is built of frame (clapboards) painted a light gray, the window frames, cornices and porches being white—the roof is slated with red slate, the chimney and foundations being of a deep red brick, laid up with three-eighth inch joints.

The interior of the house, floors, trim, etc., are all of V. P. stain and varnished.

The two family house on page 55 was designed by Edwy E. Benedict, of Waterbury, Conn. It is intended for erection on a small village or city lot, where village features predominate.

A study of the plans shows very complete isolation of the families at front and rear. The vestibule alone being in common, while the rear entrances are separate, and the cellar divided. While the third floor is divided between the first and second floors, each part being approached by separate stairways.

A $3,800 two family shingled house by Homer Kiessling is given on page 56. With the cost in mind, the following sketches show what may be done, if one should use the architect's working drawings and specifications. Using the greatest economy of space, simplicity of treatment and giving proper attention to position, and surroundings, and assuming that the land faces the south, this makes an ideal two family house with the appearance of a single house.

The house may be placed thirty feet from the street and in the middle of the width. A grass lawn and a trim low hedge enclose the lot. The exterior of the house is shingled, the walls are stained gray, and the roof stained green. The wood finish is of cypress oiled; the window and door sashes are painted white, and blinds of stock sizes painted green.

The dining-rooms each contain a quaint brick fireplace and hearth laid with wide, white mortar joints. The basement floor is concrete throughout, and walls of local stone, whitewashed. All other floors throughout the house have spruce centers and hard pine borders, waxed and oiled. All wood finish is of whitewood of the simplest character, which can be stained in " Flemish Style " or painted, as desired. Walls and ceilings are plastered and may be tinted in solid colors, or, if desired, may be papered in some of the numberless artistic designs that are manufactured in inexpensive wall papers. The house is heated by hot water, one heater doing the work for the two flats. Electricity is used for lighting, with fixtures of the simplest designs. Bath room fixtures are of stock iron ware, painted white, with brass piping, and hardware of same style for light fixtures.

Estimate of Cost

Excavation and Foundation, Masonry	$ 550.00
Millwork, Lumber, Carpentry	1600.00
Plastering	450.00
Plumbing and Heating (hot water)	800.00
Painting	100.00
Hardware	120.00
Electric Lighting	180.00
Total	$3800.00

The house shown on page 57 was designed by Thomas Bennett of Brooklyn for erection in that Borough. It is a strictly city-house, to be erected in a block and is for the occupancy of three families. It is of brick, three stories high and cost $7,000 to build. It has hardwood trim throughout, grilles in trimmed openings, cabinet mantels with mirrors in dining-rooms and parlors and parlor heaters in each dining-room and parlor. The public hall partition is of one-half inch plaster boards covered with plaster. Vestibule and bathroom floors are tiled. The first floor contains five rooms and bath, and the two upper floors six rooms

and bath, each with buffets, china closets, wardrobes, dressers and closets complete. All accessories of plumbing fixtures, dumb waiter and ice box niches are complete, and all rooms and halls are ventilated according to the requirements of the tenement house department. Size of building, twenty feet by fifty-four feet three inches.

The house on page 59 is likewise a city house and from designs by the same architect as the preceding one.

It is a three story brick with stone front, two family dwelling and can be built for $6,000. Size of building twenty feet by fifty-two feet, with circular bay window in front. The trim throughout is hardwood, with grilles in trimmed openings, cabinet mantels and mirrors, buffets and china closets, dressers and wardrobes complete. There aie two sets of plumbing, one for each family. Bathroom and vestibule floors are tiled, and dining-rooms, as well as vestibule, have paneled wainscoting. Two furnaces are provided in cellar, one for each family. Dumb waiter from cellar to roof, also ice box niches all complete.

The design on page 61 is also a city house and was designed by Henry Pohlmann, of Brooklyn. It is arranged for two families and is equipped with all modern improvements. This class of dwellings has been erected in large numbers in this borough and has found a ready sale.

The house on page 63 was designed by James T. Ball of Boston, and was intended for a situation where the lot was broad but not deep, in fact very shallow. This design presents a front which is marvelous for the amount of expenditure, as it has the appearance of a six-flat house. The piazza is an especially attractive feature and with more land could be deepened one or two feet to good advantage. A second feature seldom met with is that three rooms are at the front of the building, usually the pleasantest part. The dining- and living-rooms are connected by a broad opening, the pantry being a close connecting link to the kitchen. The chambers and bath are close together, back of which is a commodious back piazza for clothes drying, etc. No space is wasted in the whole house, there being three good rooms in attic. As shown in illustration, this house was built complete with furnace heat for $6,500. Flats rented before finished at $25 to $30, and a highly pleased owner was the result of this operation.

On pages 64 and 65, also from the hands of James T. Ball,

appears the design for a large stately Colonial house 38 by 38 feet in size. The aim in planning this house was to obtain a structure which would be a welcome addition to a neighborhood, and, while being a two-family house, still present the dignity and repose of a single mansion. This treatment has been retained in working out the inside, and one steps into a large reception hall, from which the main rooms open very like the single houses of this type. The first floor apartment has two chambers on the second floor, reached by private staircase, the second floor apartment taking the entire third floor for chambers and bath, exactly as in a private house. All rooms are large and the plan has much to recommend it. It should be built with hot water heat for $7,500, and rent for $50 and $60 per flat a month, showing a handsome return on the investment.

On page 67 is shown another of Mr. Ball's designs, a three family house. Regarding this Mr. Ball says:

Until the advent of this house in the vicinity of Boston, all three family houses had been built on the narrow deep plan, say from 22 to 28 feet broad and 50 to 75 feet deep. A builder, realizing how much easier it had been for him to sell his broad two family houses, made the request for this type in a three-flat, and immediately it sprang into favor and has been extensively copied throughout this section. The original was 36 by 36 feet, with front bays in addition. In this particular plan the front has been brought out to the line of the bays, making it 38 feet deep. This costs no more than the original. In this design we have a Colonial house both inside and out. The rooms lead off from a useful, large square central hall, not from a long, narrow dark corridor, as was the practice. There are five rooms—bath and back piazza all enclosed under the one roof. All rooms are light and sunny. The designer lived in one of these suites two winters ago and kept very warm indeed with but three and one-half tons of coal for the furnace. Finished plainly, this house can be built for $6,000 complete, while $500 added would give the rich appearance presented by the accompanying illustration. There are a dozen of these houses renting for $25 to $30 per flat.

The house on page 69 is a two family house erected from the design of Messrs. McClure & Holmes, in Jacksonville, Fla. An ample veranda and balcony are on the front and separate entrances for the first and second floor and stairs for the second floor are on the rear veranda.

The house is intended to meet the needs of a Southern climate and for this reason is provided so amply with veranda and balcony space.

The house shown on page 71 was erected at New Haven, Conn., for Mr. F. Von Beren, from the designs of Messrs. Brown and Von Beren, architects, of that city and cost $8,000.

The building is intended for two families and has a front vestibule and hall in common, also rear hall and stairs.

The exterior of the house is wide clap-boards and stained shingles. The underpinning is of field stone.

The house is heated by furnace, has open sanitary plumbing, and the bath rooms tiled. The floors are hardwood on first and second stories and on these stories hardwood trim. Open fireplaces are furnished in principal rooms, and clothes chutes for each family. A large veranda is provided for first floor and balcony for the second floor. There are four rooms in the attic.

On page 73 is another two family house designed by the same architects, this is a larger house and cost $10,000. A study of the plans shows a vestibule in common, but separation of the hallways for the first and second story tenants. As in the previous house the rear hall and stairway are in common. The third floor is divided into five rooms, which are approached by front and rear stairs and can be divided between the two tenants.

The exterior is clap-boards and stained shingles, underpinning rock faced East Haven stone, and slate roof.

The cellar bottom is cement and has laundry and servants' closet. Open fireplaces are set in all the principal rooms. The system of heating is by hot water, and separate boilers are provided for each family. The bath rooms are tiled and fitted with latest improved sanitary equipments. Floors are hardwood, as is also the finish throughout the house.

The house on page 75 is also from designs by the same architects.

The treatment is much simpler and the cost lower, it can be erected for about $7,500.

The exterior and roof are stained shingles, the underpinning brick. Through a tiled vestibule, separate entrances are provided for the first and second stories.

The cellar bottom is cemented, a separate laundry and servants' closets, as well as separate hot air furnaces, are provided.

The bath rooms are equipped with latest sanitary plumbing.

There are double floors throughout the house and the finish in the principal rooms is hardwood and the bed rooms North Carolina pine. Four rooms are finished in the attic.

On page 77 is a house recently erected in The Bronx from designs by Mr. Albert E. Davis, architect. This type of two family house has been in very general demand in this borough. The purpose is to present a design that can be erected on a narrow lot, yet furnish some of the features of a village house.

The house on page 78 is a two family house designed by C. E. Schermerhorn, architect, Philadelphia. It is intended for a broad lot and the entrances are well apart, securing the most complete isolation for the families. The division is on a straight party wall. Ample verandas are provided.

On page 79 is shown a three family house by C. Jerome Bailey, architect, of Waterbury, Conn., and affords a good example of what can be accomplished in a comparatively small building where well planned. The three floors will bear careful study. The house is a good investment property.

The house on page 81 is a large two family house and is from the design of Brown and Von Beren, architects, of New Haven, Conn. The treatment is very simple, wide and narrow clap-boards being used in the exterior, while the underpinning is concrete blocks, the foundations stone, and the roof slate. Complete separation of entrances is made both front and rear. The cellar has cemented bottom and is divided for the two families, having separate laundries and servants' closets and separate hot water heating boilers for each tenement.

The principal rooms have open fireplaces; the finish is hardwood throughout and the floors are hardwood. Plumbing of the latest approved style. In the attic two rooms are finished for each family, and slop sinks provided. Clothes chutes communicate with the laundries.

The method of construction employed in the twin house at Tuxedo Park, N. Y., shown on page 83, was very much similar to balloon framing with wood lumber. Instead of using wood as a structural material Metal Lumber was used throughout for joists, studs, rafters, bridging, sheathing, lath, etc.

The Metal Lumber shapes are similar in section to rolled steel shapes and have prongs punched from the flanges by means of which the metal lath is applied for ceilings, sidewalls, partitions, etc.

TWO FAMILY AND TWIN HOUSES

Metal Lumber framing is supported on a reinforced concrete foundation and secured thereto by means of anchor bolts. Expanded Metal Lath is applied to Metal Lumber shapes and same covered with three coats of cement plaster, the last or finished coat left very rough.

The roof is constructed by laying a Ferro-Lithic Interlocking steel plate on metal rafters, same being covered with 5-8 of an inch of cement plaster, upon which is applied an asbestos waterproofing material.

All water and vent pipes, also electric light wires and hot air ducts are concealed in floors, partitions and walls in exactly the same manner as in wood constructed buildings.

Window and door frames were made of wood and securely fastened to steel studs. Base boards and picture moulds are secured to steel frame work by means of wood nailing blocks inserted in soffits of channels.

Metal Lumber shapes were cut to exact lengths and put in place by means of erection diagrams; every member was given a mark same as on erection drawings, and by this method it was possible to construct the building in a very short time.

The Metal Lumber was substituted for wood as a structural material in every part of the building, and by so doing an absolutely non-combustible building was secured, no insurance being required on the structure.

The Metal Lumber was manufactured by the Berger Manufacturing Company of Canton, Ohio, and erected by the Taft-Howell Co., of Cornwall Landing, N. Y.

On page 85 is shown a block of two family houses recently erected by Mr. G. P. Muller, builder, in Bedford Park, The Bronx.

On pages 86 and 87 are shown plans and elevations of a two family house erected from the designs of Mr. Albert Winslow Cobb, architect, of Boston.

The arrangement of plans is such as to secure complete isolation. The cellar is divided, each part approached by private stairways, separate heating plant, etc.

On pages 88 and 89 are shown three two family houses designed by M. Edward L. Davis, architect. In these designs the apartments are divided by floor levels, with one family on the first floor and another on the second.

TWO FAMILY AND TWIN HOUSES

The plans here given are fairly representative of the class, and reveal the utilitarian nature of the type rather than any architectural novelty. No extended description is necessary, reference being made merely to the distinctive features of each.

Page 88 shows a scheme in which the occupying families use in common the front and rear halls, and also the first story porches. The second story gains an extra room off the parlor in the space occupied by the hall below, and also has the private use of the upstairs piazza. The house could be finished in clap-board, and shingle and color effects could be produced to suit the taste of the owner. In the interior finish, oak, cypress or hard pine in the natural state could be used for the principal rooms, and the others finished in soft wood painted. The bathrooms should be fitted up with good porcelain enameled fixtures. The cellar should be divided with a furnace in each section. The cost would be about $5,000.

The left-hand design on page 89 shows a house of the same size as the last described, similar in plan except for the arrangement of the front entrances. Here there is a common vestibule with separate inside entrances for each family. Finished on the same grade as the former, the cost of house would be about the same as the last.

The right hand design shows a frame two family house with separate front and rear entrances. The front piazza, however, is used in common by both families. This house could be built for about $4,500.

The house on page 91 is a three family house designed by Freney & Jackson, architects. The three floor plans give a clear idea of the arrangement.

The house on page 93 is a two family house designed by Mr. James T. Ball. It was erected on Blue Hill Avenue, opposite Franklin Field, Dorchester, Mass., and was designed to be as impressive as its surroundings demanded, with its classic portico and broad lower piazza. Each flat comprises six rooms, besides a reception hall, which is the size and answers almost the purpose of a living-room; four of the rooms open off this hall, and the rear chamber, kitchen and bath are reached from a small hallway, the chambers and bath being especially well arranged to give privacy and handiness. In the attic are three storage rooms, which, if desired, would give each flat an extra chamber for maid

or family overflow. At the desire of the owner, the circular bays shown in illustration were added at a slight additional cost. With hot water heat, cost was $7,200, and flats rent at $35 per month.

On pages 94 and 95 are given the floor plans and view of a house erected in the vicinity of Boston, also from the designs of Mr. James T. Ball. It is a modest fourteen room house, where separate front entrances are achieved by means of a side piazza and entrance giving complete isolation. There are six rooms to the lower apartment and eight to the upper. In the latter, the living-rooms in front are connected by a broad opening making a very large and commodious suite. At the rear, the luxury of a butler's pantry is provided, besides the regular pantry. In these plans there is a back stairs from second floor to attic, which is a requirement by law in that city, and in this case affords ready access to a servant's room at head of same. This house cost $6,000 with furnace heat, and rents for $35 and $40 per month.

On page 97 is shown a sketch and plans for a two family house, designed by A. F. N. Everett, architect, of Atlanta, Ga.

SPECIFICATIONS

EXCAVATION. Entire basement to be excavated to depth as indicated on elevations. Excavation for foundation walls to be carried to solid earth foundation at least two feet below the basement floor level.

FOUNDATION. Foundation to be of all hard burned brick laid in cement mortar. Principal walls to be 13" thick. Walls under basement partitions to be 13". Footings to have at least 8" spread.

BRICKWORK. Other brickwork, such as chimneys, flues, etc., may be of soft brick from ground line to rafters. Then to be topped out with all hard brick. Flues to be sizes as shown on plans, plastered smoothly on inside with cement. Area walls to be of all hard brick, sizes as shown, laid in cement mortar. Bottom and inside of area walls to be cement, with outlet to carry off water, properly trapped and connected to sewer.

WATER-PROOFING. Inside of walls in basement to be covered with a good coat of Dehydratine water-proofing compound to a height at least 12" above the grade.

FRAMING. Framing timbers to be cut from long leaf South Georgia pine, sizes as hereinafter specified. All framing to be sized to an even thickness. Floor joist to be 2 x 10, well braced with herringbone bridging. Sills to rest on brick walls to be 2 x 8, well bedded in mortar. Other sills to be 6 x 10. Studding to be 2 x 4, 16" on centers. Plates to be 2 x 4, doubled. Ribbon strips to be 1 x 5, notched into studding. Ceiling joist to be 2 x 6, 16" on centers. Common rafters 2 x 4, 24" on centers. Hip and valley rafters 2 x 6. All framing to be plumb and true, framed in the best manner. Corner and angle posts to be 4 x 4, with 2 x 4 spiked on to form angle. Outside walls, also

floors, to be sheathed with $\frac{7}{8}$" dressed boards laid on diagonally, firmly spiked into each and every bearing. Outside walls and first floor to be covered with good quality building paper. Outside walls to be furred with 1 x 3 strips, 12" apart, to receive metal lath to carry cement plaster, as hereinafter specified.

Deadening felt to be used between sub-floor and finished floor of second story.

ROOF. Roof to be sheathed with 1 x 3 strips to receive shingles, put on 5" to the weather. Shingles to be all heart pine A-1 or cypress. To be stained with Creosote stain.

If terra cotta tile are used for the roof, roof to be sheathed solid with $\frac{7}{8}$" boards, laid close together with necessary furring strips to fasten the tile.

Roof to be framed as shown in detail and in accordance with roof plan. Necessary hips and valleys, secret gutters formed under cornice as shown.

TIN AND GALVANIZED-IRON WORK. Valleys and flats to be done with Old Style tin. Flats to be painted on under side with metallic paint before applying. Rain water conductors to be 4" galvanized iron, to connect with sewer. Ridge rolls and finnials to be galvanized iron, pattern as shown.

BALCONY. Balcony to be built as shown, with proper fall. To have heavy tar paper between sub-floor and finished floor. All outside floors to be tongued and grooved, laid in white lead joints. All detail work to be strictly as shown, made from the very best pine timber and in strict accordance with elevations.

INTERIOR FINISH. Interior finish to be as shown in detail. All woodwork in living-room, dining-room and hall, also vestibule and staircase, to be quartered sawed oak. Sideboard, lockers, and cabinets to be built according to detail in the best manner.

Back porch to be latticed between columns. Rear stairs to be built as shown, of Georgia pine; neat hand rails and balusters. All put together in substantial manner.

Main staircase to be built as shown, 7" rise, 12" treads. Treads to be nosed with mould under same. Balusters to be turned, hand rails moulded, square newel-panelled.

EXTERIOR PLASTERING. Entire exterior of house to be plastered on herring-bone expanded steel lath. Put on furring strips as shown. First coat, one-half inch thick. Mix one part of non-staining Portland Cement with two parts medium sand, one part fine sand, and one-half part lime flour. When this coat has set hard, wet the surface thoroughly and apply the second coat with a wooden float. Second coat to be $\frac{1}{4}$" thick. One part cement, one part fine sand, and two parts medium sand or crushed granite. The upper part, as shown on plans, to be marked off to form frieze and to be pebble dashed.

VERANDAS. Front veranda to be framed, as shown, with shingled arch and columns. Ceiling to verandas to be narrow beaded ceiling, well nailed and drawn together tightly.

TERRACE. Terrace in front of house to be as shown on plans. To be laid in all hard brick, red. Pedestals to be built of red brick, laid in white mortar. Caps to the pedestals, also buttress caps at steps, to be of concrete. Iron pipe railing between pedestals as shown.

BASEMENT. Basement apartments to be as shown on plans. Furnace and fuel rooms to have brick floor. Laundry and servants' closet to have cement floor

on top of 2″ concrete. Servants' rooms and hall to have wood floor. Storage room to have cement floor on top of 2″ concrete. Furnace flue in basement to be built as shown, 12″ x 12″, with clean-out below, fitted with iron door.

HEATING. House to be heated with hot-air furnace of standard make, guaranteed to heat the house to 70° in zero weather. All register pipes to be of bright tin, covered with asbestos. Registers to be located, as shown, in each room. Fresh air ducts to be located in best possible position to secure results.

Laundry to be fitted with two slate laundry tubs; hot and cold water connections.

Servants' closet in basement, as located, to be Neptune, low tank, fitted with hardwood seat, necessary chain and pulls, complete.

All rooms and hall in basement, except storage room, to be plastered with hard wall plaster; sand finish under carpet float.

All other plastering throughout house to be of patent hard wall plaster, sand finish, in the same manner.

ELECTRIC WIRING. House to be wired for electric lights, outlets as shown on plans. Proper switches and cut-offs in each room to operate lights. Wires to be in armored conduits.

Each kitchen to be fitted with four-number annunciator; one push button at main entrance door in vestibule; one from each bedroom and one from dining-room (floor push).

GAS PIPING. Gas piping to run throughout house, to the several outlets for lighting and stoves.

INTERIOR FINISH. All doors and windows to be sizes as shown. Sliding doors to be 1¾″ thick; also front doors. Other doors throughout to be 1⅜″ thick.

All double hung windows to be sizes as shown, hung on approved crown axle pulleys, with best Samson spot cash cord, properly weighted with cast-iron weights. All other windows to be as shown, for art glass, pivot hung where necessary.

EXTERIOR PAINTING. All woodwork to be painted three coats white, using for same the very best white lead and linseed oil.

Shingles of front veranda to be stained dark brown with Cabot's best shingle stain. To be dipped two-thirds of their length in same before putting on.

Roof (if shingled) to be terra cotta in color, using Cabot's stain for same.

All sash to be painted white.

INTERIOR PAINTING. All woodwork in living-room, hall, and vestibule to be stained Flemish Oak and waxed with Butcher's prepared wax.

Dining-room, butler's pantry, and kitchen to be stained in like manner.

Bathroom to be painted white enamel, left in egg-shell gloss. Also woodwork in bedrooms to be treated in same manner.

Wainscoting in kitchen three feet high to be cement, with neat wood cap and base. Wainscoting in bathrooms to be three and one-half feet high, or best Keene cement, cut up in imitation tile. To have neat wood cap and quarter round at floor.

All floors throughout to be stained and waxed.

Colors to harmonize with each apartment.

TINTING AND DECORATING. Living-room side walls to be painted water color,

dark tan. Ceiling between beams to be same color. Around arches in living-room a neat stencil design to be applied in red and green. Wainscoting in living-room between wood strips to be burlapped with dark green in color.

Dining-room wainscoting to be burlapped, dark green in color. Side walls to be dark olive, tinted. Ceiling to be cream. Stencil design in panels around wall at top.

Bedrooms to be tinted light blue, ceilings cream; frieze stencil, red and green.

Kitchen walls to be painted in oil, light gray.

PLUMBING. Plumbing fixtures located as shown, in each bathroom. Fixtures as follows:

One 5′ 6″ roll rim, enameled bath tub, with nickel-plated cocks for hot and cold water.

One Cahill American Beauty wash basin, with back and apron. Nickel-plated cocks for hot and cold water.

One "Douglass" one-piece porcelain water closet, with hardwood seat and tank. Necessary chains, pulls, etc.

In each kitchen there will be one 30-gallon galvanized iron boiler, to be connected with range.

In each pantry one copper pantry sink, copper drip board and copper back; tall pantry cocks, nickel-plated, for hot and cold water.

Combination iron enameled kitchen sink and laundry tub, connected for hot and cold water.

ESTIMATE OF COST

327 cu. ft. excavation at 30c. per yard	$ 98.10
50 M. brick laid in wall at $13.50	675.00
6000 ft. storm sheeting at $15.00	90.00
5500 ft. flooring pine at $30.00	165.00
17,500 shingles at $4.75	83.12
1000 ft. ceiling at $22.00	22.00
13,500 ft. framing at $15.00	209.50
Mill work including doors, windows, exterior and interior trim	1564.00
355 sq. yd. metal lath at 16c. per yd	56.80
455 sq. yd. outside plaster, stucco at 55c. per yard	250.25
7 rolls bldg. paper at $1.25 per roll	8.75
84 yds. cement floors and concrete at $1.15	100.60
26 yds. cement wainscoting and coping at 45c. yd	11.70
Concrete steps and buttress caps	27.00
Electric wiring and bells	80.00
Plumbing and gas fitting	500.00
Painting	250.00
Tinting and decorating	100.00
Tin and sheet metal work	60.00
Gas and electric fixtures	100.00
Hardware and nails	100.00
Art glass	100.00
Pressed brick mantels	100.00
1600 yd. inside lathing and plastering at 25c	400.00
Carpentry rate $2.50 per day, labor $1.00	800.00
Incidentals	50.00
Furnace	350.00
	$6351.82

TWO FAMILY AND TWIN HOUSES

The two family house shown on page 99 was designed by Mr. Albert E. Davis, architect, of the Borough of The Bronx, New York.

It was erected for Mr. George Kolbe on Coligni Avenue, New Rochelle, N. Y.

The building is 23 feet by 55 feet, and contains five rooms and bath on the first floor and six rooms and bath on the second floor, with dumb waiter, refrigerator and closets, and coal and gas ranges.

The dining-rooms are finished in oak and the other interior woodwork is of chestnut.

The vestibule and bathroom have a tile floor and wainscoting.

There is a bay window the full width of each parlor and the dining-rooms have a bay window on the side.

There is a broad piazza front and rear for each family.

The walls are built of cement blocks and the roof is shingled.

Electric bells and speaking tubes are provided.

The cost was about $6,000.

The double house on page 101 is from designs by Mr. D. B. Provost, architect, of Elizabeth, N. J.

Front and side elevations and two floor plans are shown. This style of house has always proved very acceptable and, being square in plan, affords very ample accommodations for the cost. A straight party wall separates the two sides and the occupants are almost as independent of each other as if in separate houses, yet the expense of building is much less than two single houses affording equal accommodations.

The design on page 102 is by A. B. Corwin of St. Louis, Mo., and is of the Taylor Apartments in that city.

As will be seen it represents an apartment building on a corner. On the corner are two stores, the upper floors and the balance of the block being apartments. The scheme is a very simple one and, notwithstanding the small scale of the drawing, will be readily understood.

The house on page 103, although for four families, yet seems to come into the same class as most of the houses in this book.

It was designed by Mr. Glenn L. Saxton of Minneapolis, Minn. It is a structure of much dignity, its great Colonial portico being quite a feature.

The plan shows much pains to preserve isolation, notwithstanding the larger occupancy.

The ample veranda and balcony give to each family an outdoor retreat for summer weather.

The twin houses on page 105 are from designs by C. E. Schermerhorn, architect, Philadelphia, Pa.

It is a large, commodious building, well suited to a broad suburban lot. The entrance porches are well apart and the division is on a straight party wall.

The house is one of much dignity and will form a notable landmark in any locality.

The design on pages 106 and 107 shows a two family house designed by Mr. A. E. Nicholson, an architect of St. Catherines, Ont., Canada. A very complete conception of the whole will be gained by reference to the plans and a careful review of the following:

SPECIFICATIONS

SPECIFICATIONS of the material and workmanship required for the erection of a brick house for two families. Designed for Mr. —— by Arthur E. Nicholson, O. A. A. Architect, St. Catherines, Ont., Canada.

GENERAL CONDITION

MATERIAL. All material and workmanship to be first class of its various kinds.

BY-LAWS. The contractor to conform with all the local by-laws and pay all fees required.

PLANT. The contractor to furnish all plant, labor, material, and transportation required.

RUBBISH. The contractor to remove all rubbish and keep the premises clean.

EXCAVATOR'S DEPARTMENT

EXCAVATE. Excavate for cellar, footings, piers, etc. The excavation to be one foot away from all walls and to the depth required. All excavated materials not required for grading to be removed from the premises.

GRADING. Grade and level off the lot as required by the drawings.

MASON'S DEPARTMENT

STONE WALLS. The stone walls from the bottom of the footings to the grade line to be built of quarry stone, laid up in lime and cement mortar. The same to have footings 6″ thick, with 4″ projections. The outside of the stone wall to be plastered with ½″ coat of Portland cement. The inside to be neatly flushed up. On top of the stone wall, at grade line, form a damp-proof course of asphalt and tarred paper.

WEEPING. Lay 3″ common field tile, covered with tarred paper, at bottom of the footings; connect the same to drain. On top of the tile fill in with broken stone to grade line.

BRICKWORK. The four elevations of the building to be faced with buff pressed brick, laid up with a white joint. The balance of the brickwork to be local stock brick, all to be laid in lime mortar. Build the fireplace in drawing-room, where shown, with buff pressed brick. All flues to have flue linings, thimbles, and clean-outs.

CUT STONE. All the cut stone shown on the drawings, such as base course sills, jambs, mullions, heads, copings, etc., to be of Indiana limestone, with tooled faces.

CEMENT WORK. The whole of the basement floor and the sidewalks to be of concrete, with a 6″ base of broken stone and a 2″ concrete top, floated to a smooth surface.

PLASTERER'S DEPARTMENT

PARQUETING. All outside brick walls on the first and second floors to be plastered with a ½″ coat of mortar on the inside.

PLASTERING. The walls and ceilings of the first and second floors and the ceiling of the basement to be plastered two coats. The last coat to be a white finish. The walls of the basement to be whitewashed. The bathrooms and kitchens to have 4′.6″ wainscoting of Keene cement.

PLASTER CORNICE. The drawing-rooms, dining-rooms, reception halls, sitting-rooms, and vestibule to have a mould plaster cornice. The bedrooms, Nos. 1 and 2 of the first and second floors, to have an 8″ coved ceiling.

TILING. The floor of the front portico and the hearth of the fireplace to be of Welsh Quarry tile. The floors of bathrooms to be of hexagonal white vitreous tile, with a mould base at floor.

CARPENTER'S DEPARTMENT

MATERIAL. All material to be good, merchantable stock. The framing to be of pine or spruce. All the exterior woodwork to be of pine. All the interior trim to be of plain red oak unless otherwise specified. The kitchen bedroom No. 3, pantry, and closets to be of pine. All the trim and floor to be kiln dried.

GROUNDS. Provide all grounds required, also bond timbers and templets.

BEAMS. Provide all wood and steel beams required.

JOIST. The first and second floor joist to be 2″ x 10″. The attic joist to be 2″ x 8″, all at 16″ centres, and bridged veranda joist, 2″ x 10″ at 16″ centres.

FRAMING. The carpenter to do all framing and erection required. All framing to be sized, trimmed, and reinforced where required.

ROOF. The roof to have 2″ x 6″ rafters, 16″ centres, covered with matched spruce sheeting and slater's heavy felt and No. 1 green slate.

CORNICE. The rafters are to be exposed with T. & G. beaded sheeting for roofing, and ⅞″ facier, ⅞″ frieze, and bed mould at wall.

PARTITIONS. Set the partitions as shown, with 2″ x 4″ studs at 16″ centres, doubled at openings. All corners solid and all partitions girthed.

VERANDA. Columns to be 10″ x 10″, panelled, based, and capped. Floor, 1⅛″ x 3″

T. & G. Second floor to be covered with canvas. The cornice to be constructed as shown. The railing to have moulded top rail and plain balusters. The stairs to have 2″ carriage and 2″ treads, $\frac{7}{8}$″ risers. Roof to be $\frac{7}{8}$″ T. & G. spruce.

PORTICO. Columns to be 10″ diameter, with caps and bases. Entablature to be as shown. Railing on top to have newels, turned balusters and moulded top and bottom rails. Ceiling to be panelled. Roof to be $\frac{7}{8}$″ T. & G. spruce.

PARTITIONS. The partitions on first floor around the reception hall for second floor to have 2″ x 3″ studs, 8″ centres, set in such a manner as to receive Cabot's sheeting quilt.

STRAPPING. External brick walls to be strapped with 1″ x 2″ at 16″ centres.

FLOORING. Lay the first and second floor with $\frac{7}{8}$″ T. & G. spruce. The second floor to be constructed as follows: On top of and under floor lay a layer of Cabot's sheeting quilt, then 2″ x 2″ spruce, T. & G. sleepers; to these sleepers secure a top floor of T. & G. plain red oak, $\frac{7}{8}$″ thick. The first floor to be constructed as follows: On top of and under floor lay a layer of heavy building paper; then cover the same with $\frac{7}{8}$″ plain red oak. The floor of kitchen to be $\frac{7}{8}$″ hard maple.

WINDOWS. All windows and sash to be of pine. The box frames are to be the usual box frames. Casement frames to have 3″ moulded jambs and heads.

DOORS. All interior doors to be $1\frac{3}{4}$″, veneered and to match the trim. The outside doors to be $2\frac{1}{4}$″, thick veneered. All the above to be as shown.

STAIRS. Front stair to have 2″ carriages, $1\frac{1}{8}$″ treads, $\frac{7}{8}$″ risers, plain newels and balusters, moulded hand rails with casing. All the finish to be of oak.

TRIM. Casings for drawing-rooms, dining-rooms, reception halls, vestibule, sitting-room to be $\frac{7}{8}$″ plain side casing, with moulded caps and bases. The head casing to have moulded caps, bed mould, and small mould on lower edge. The rest of the casing to be similar, but much plainer. Windows to have stools and aprons. Base to be a two-member $\frac{7}{8}$″ base, 10″ wide, with moulded floor strip. All rooms and halls to have picture mould. The dining room to have plate rail.

DRESSERS. The dressers in pantry to be as shown on the drawings.

CLOSETS. All closets to have hook strip and shelving.

REFRIGERATOR. Build in pantry refrigerator provided by the proprietor.

MANTEL. Build mantel in place shown on the drawings.

CELLAR FITTINGS. Provide platform for laundry tubs, shelving and bins for storeroom.

HARDWARE. The contractor will supply all the sliding door hinges, sash weights, cords, pulleys, nails, screws and bolts, etc. The owner will supply all the finish hardware, such as locks, bolts, butts, knobs, latches, sash locks, transom rods, drawer pulls, hooks, etc. The contractor must take charge of this hardware and place the same in position.

MEDICINE CHEST. Form medicine chest in bathroom where shown.

CABINET FOR WIRE. Form cabinet for wires on first and second floors.

CHINA CLOSET. In dining-room build where shown a china closet with movable shelves and glass doors. Beneath the same build into place a safe provided by the proprietor, with doors at front.

TWO FAMILY AND TWIN HOUSES

SHEET METAL WORKER'S DEPARTMENT

EXTERIOR METAL. All gutters, down spouts, valleys, roofs, flashing required to be of galvanized iron.

INTERIOR METAL. The two clothes chutes to be of galvanized iron. Carry from each of the bathrooms and the toilet rooms in the basement a galvanized iron vent to the chimneys, with registers in the rooms.

PAINTING AND GLAZING DEPARTMENT

GLASS. All windows to be glazed with 21 oz. glass. All interior doors marked for glass to be glazed with obscure glass. The front doors and vestibule door to have leaded glass.

PAINTING. The whole of the exterior wood and ironwork to have three coats of white lead and oil. The interior pine trim to receive three coats of paint. The oak trim to be filled with paste filler, a coat of turpentine shellac, and two coats of hard oil finish. Each coat to be well rubbed down. Place mirror in medicine chest.

DECORATING. The interior walls of both houses to be decorated with two coats of Muresco on a coat of size.

FLOOR FINISH. The oak floors to be filled with paste filler, two coats of Liquid Granite A. (the above to be of Berry Bros. make), each coat to be well rubbed down. Maple floors to have three coats of oil, well rubbed.

PLUMBER'S DEPARTMENT

DRAINS. All drains and soil pipe to be of extra heavy iron, provided with all traps, gratings, clean-out screws, fresh air inlet, and all fittings required. All traps to be back-vented. All down spouts and field tile to be connected to drain.

WATER SUPPLY. Make connections with the street service; carry into the buildings $1\frac{1}{2}$" galvanized iron main, carry $\frac{3}{4}$" supply to heating boiler, hot water boiler, laudry, kitchen, bathrooms, and hose bibs with $\frac{5}{8}$" to sinks, baths, W. C., laundry tubs, and $\frac{1}{2}$" to basins. Hot water pipes to be same size. All pipe to be galvanized iron.

HOT WATER BOILER. Provide and set one 60-gallon copper boiler in basement, connected to hot and cold water service and with draining cock connected with sewer.

GAS HEATER. Provide and set one Lawson gas heater, connected to hot water boiler and gas service. The gas supply to be regulated by an automatic valve.

BATH TUBS. Provide and set in each bathroom one 3" roll rim enamel bath, with combination bibs. Supply and trimmings to be nickel-plated.

WASH BASIN. Provide and set in each bathroom a one-piece enamel wash basin, with nickel-plated supply and trimmings.

WATER CLOSETS. Provide and set in each bathroom a low-down siphon jet bowl, vitreous ware with copper lined oak tank, oak seat and cover. Trimmings to be nickel-plated. Closet in basement to be a wash-out closet, with high tank.

SINKS AND WASH TRAYS. Provide and set in each kitchen a combination enamel wash tray and sink, with nickel-plated trimmings. The sink in W. C. in basement to be a plain enamel sink.

LAUNDRY TUBS. Provide and set in laundry a set of three enamel laundry tubs, with cast iron standard and nickel-plated trimmings.

REFRIGERATOR. The waste of each refrigerator to discharge into sink in W. C. in basement.

GAS FITTINGS

From the three meters in cellar lead one service to second floor house, one service to first floor house, to supply the same for lighting for fireplaces and for kitchen ranges.

The other service to supply the gas heater for hot water.

HOT WATER HEATING

Provide and fit up complete a system of hot water heating as indicated on the plan.

BOILER. The boiler to be a Gurney. From boiler carry a smoke pipe of No. 24 gauge galvanized iron to the chimney, with damper in same. Carry blow-off from boiler to drain.

MAINS. From boiler carry a 2″ flow and a 2″ return main, and from them branches of suitable size to supply the various radiators with all fittings and trimmings required.

RADIATORS. Provide and set up the radiators where shown on the plans. Each radiator to have N. P. valve and air cock.

PIPE COVERING. All pipes to be covered with hair felt. Those showing in basement to be also covered with cotton.

EXPANSION TANK. Expansion tank to be fitted up in bathroom on second floor with water gauge, dry cock, and discharge pipe. Connect the tank to water service.

ELECTRIC WORK

All the electric work herein included shall be executed according to the rules and the regulations adopted by the National Board of Fire Underwriters and subject to the inspection and approval of the Local Board of Fire Underwriters. The contractor shall pay all charges for the inspection of the work, and upon its completion secure a certificate of its acceptance. He shall also furnish a guarantee pledging himself to maintain, at his own expense, the very best service, and secure likewise, at his own expense, for a period of two years the efficiency of the system, and shall submit both to the architect.

SYSTEM. At entrance of mains in basement, place a good knife switch and cut-out of ample capacity. Then run three loops to supply three meters—one for the basement, one for the first floor, and one for the second floor. From each of these meters run a main to the distributing cabinet, placed on each floor where directed. From distributing cabinet run feed to supply all points marked on the plan.

CABINET. Provide and set steel cabinet, with slate slab cut-outs and switch complete, where directed.

WIRE. All wire must be first-class rubber-covered wire, and the wire to be 98% copper. The same to be supported on porcelain knobs and placed in circular loom at outlets, tapped to gas pipes. Where wires pass through timbers they are to be placed in tubes. The wiring shall be taut.

The outlets, only except to switches and cut-outs, which must be installed complete. At each outlet the wires shall be left ready for connection to fixtures. All wire shall be concealed. All joints must be well soldered and tapped.

SWITCHES. All switches to be Hart flush push switch, with steel wall boxes. Plates to match the hardware.

BELLS. Provide and install in complete working order in each house, electric bells as follows: One at front door, one at side door, one at rear door, and one in the drawing-room—all to ring in kitchen.

Push in dining-room floor, with table clamp to ring buzzer in kitchen.

ANNUNCIATOR. Provide and set in each house one four-drop annunciator, with neat hardwood frame and a three-inch bell on top. Provide suitable wet batteries and run best insulator wire for all bells.

SPEAKING TUBES. Furnish and erect, with mouthpiece and whistle complete, 1" tin speaking tube from basement to kitchen on second floor and from basement to kitchen on first floor; from door at dumb waiter on first floor veranda to second floor kitchen.

COLOR SCHEME

The exterior walls are to be buff pressed brick, all stretchers laid up with a white mortar joint. The cut stone trimmings to be light gray. The woodwork to be painted white, except the sashes, which are to be a dark rich brown. The slates of the roof are to be a light green.

ESTIMATE OF COST

Excavation	$ 200.00	Painting and Glazing and Decorating	
Excavating 25c. per yd.		Painter 26½c. per hr.	
Hauling 30c. per yd.		Painting,	$450.00
Mason Work	$ 1,880.00	Glazing including all glass,	$115.00
Mason 45c. per hr.		Decorating,	$135.00
Laborer 22c. per hr.		Metal Work	$
Pressed brick $18.00 per M.		Metal worker 32c. per hr.,	80.00
Laying brick, pressed, $7.00 per M.		Plumbing	$ 500.00
Laying common brick $5.00 per M.		Plumber 32c. per hr.	
Common brick $8.00 per M.		Iron sewer $1.25 per ft.	
Cut Stone	$ 550.00	Gas Fitting	$ 35.00
Stones 35c. per cub. ft.		Gas Fitter 32c.	
Stone cutter 50c. per hr.		Gas piping 10c. per ft.	
Cement Work	$ 200.00	Hot Water Heating	$ 600.00
Walks 15c. per ft.		Heating 75c. per sq. ft.	
Basement floor 12c.		Labor 32c.	
Work done by mason.		Electric Wiring, Bells and Speaking Tubes	$ 175.00
Lathing and Plastering	$ 460.00	Electrician 35c. per hr.	
Lathing and plastering 28c. per yd.		Hardware	$ 200.00
Plasterer 45c. per hr.		Tile Work	$ 100.00
Laborer 22c.		Bathroom floors, 30c. per sq. ft.	
Carpenter and Joiner Work	$ 4,400.00	Sanitary base, 40c. per lineal ft.	
Carpenter 33c. per hr.		Portico, 65c. per sq. ft.	
Spruce $25.00 per M., Pine for trim $40.00.			
	$7690.00		$10,090.00

The house on page 109 was designed by Mr. A. F. Miller, an architect of El Paso, Texas. As will be seen by the architect's

description, given below, it can be used as a single house, a two family house or a two family house for a large and small family.

It has a stone foundation, common brick walls, stud partitions, cellar under entire house to be used for laundry, heating, fuel, etc. As a two family house, the first floor is divided into stair hall, parlor, dining-room and kitchen, with pantry. Second floor has bath, three bedrooms with closets, but one family may use four or five bedrooms and not disturb the smaller family that only occupies one or two bedrooms and bath. By removing portable partition in stair hall, a fair sized reception room is added and the house can be occupied by one family.

All woodwork Texas pine, single floors, gravel roof, skylight over bath.

ESTIMATE OF COST

Excavating	$ 200.00
Stonework	400.00
Brickwork	1100.00
Carpentry Stairs, Lumber, Etc.	4000.00
Roofing (Gravel)	100.00
Plastering	410.00
Painting	250.00
Total	$6460.00

Cubical contents, 65,600 cubic feet.

On pages 110 and 111 are shown several views and a typical plan of two family houses, such as have recently been erected in the suburbs of Newark, N. J.

The design on page 113 is of a twin house and is from designs by C. E. Schermerhorn, architect, of Philadelphia.

This building is intended for a large village lot or country place. The ample verandas adapt it for a summer house or all the year round home.

The house on page 115 was designed by Frank Lyman Austin, architect, of Burlington, Vt., and erected in that city for Mr. Henry A. Hagan.

It is located on the west side of Willard Street, one of the many long, elm-shaded streets which run parallel to the lake shore and extend the length of the city, from College Hill into a series of terraces.

This house, located as it is, on the west side of the street, commands a view, from the rear, of the Lake and the Adirondacks beyond.

The house comprises, on the first floor, the reception hall, divided from the staircase and coat closet by pilasters and a circular top arch; living-room with fireplace and window seat; dining-room, pantry and kitchen, also entrance porch and rear veranda.

On the second floor, a large family chamber with two clothes presses and a small room, which can be used as a den, dressing-room or sewing-room; two medium sized chambers with clothes presses, and a bathroom.

On the third floor only the hall and servant's chamber, over the bathroom, are finished, the balance is left for storage, although provision is made for the finishing of two extra chambers.

The basement has a cemented floor and is divided into a laundry room with set tubs; a cold storage room and boiler room with coal bins.

The exterior is of brick from grade to second story floor, with shingle above. The cornice is of the open exposed rafter type, very plain.

A very effective exterior color scheme is carried out. The red brick are laid in red mortar, the shingle stained dark green, the trimmings of green a shade lighter, and the slate on the roof are of variegated dark green and dark red.

The entire interior is finished in North Carolina pine finished natural. The reception hall, living-room, dining-room and hall were stained before varnishing.

The floors are of birch in all the rooms excepting the chambers, which are of spruce finished for carpeting.

The fireplace and hearth are built of common red brick with a plain, inexpensive mantel.

The house is wired for electric lights, and the fixtures and hardware are of bright bronze.

The plumbing fixtures are of medium grade and cost, supplied with hot and cold water from gas heater and furnace connections.

A hot air furnace of ample size supplies heat to all rooms, including servant's room in third story.

This house will cost from $5000 to $6000, according to the quality of materials used and the price of labor.

The house on page 117, known as "The Gables," was erected at Burlington, Vt., for Harry S. Howard from the designs of Frank Lyman Austin, of the same city.

It is situated near the south end of College Park, and commands a view down Main Street to the Lake, and across the Park to the University buildings.

The house is occupied by Professors of the University, and, planned with this end in view, the cost of construction, determined by monthly rental, must be low; ample room for entertaining must be provided and also a quiet study or den for the Professor.

A point insisted on by the owner was that the house must appear as a single house, avoiding all appearances of the conventional double house.

The house comprises, on the first floor, the entrance hall, with staircase, coat closet and lavatory; the reception room, living-room, dining-room, kitchen, pantry and refrigerator room. Rear and basement stairs open from the kitchen, and there are also ample front and rear porches.

On the second floor, a large family chamber with two clothes presses, and a door opening directly into the bathroom; two medium sized chambers with clothes presses; and on one side the family chamber has a small dressing-room and a separate small study room or den. On the other side there is only one small room, which can be used for either a dressing-room or den.

On the third floor two chambers are finished, the balance left for storage purposes.

The basement has a cemented floor and is divided into a cold storage room, a boiler room with coal bins, and a laundry with set tubs.

The exterior is of brick from grade to second story floor, with shingle above. The cornice is very plain, of the open exposed rafter type.

The exterior color scheme is as follows: red brick laid in red mortar, shingle stained brick red, trimmings of dark green, and the slate on the roof are of variegated dark green and dark red.

The entrance hall, living-room and dining-room are finished in North Carolina pine stained dark brown. The kitchen, pantry, and refrigerator room in North Carolina pine finished natural. The reception room and balance of the house in soft pine painted flat white.

The floors are of birch in all the rooms excepting the chambers, which are of spruce.

The fireplaces and hearths are of common red brick with craftsman mantels.

The house is wired for electric lights, and the fixtures and hardware are of old bronze.

The plumbing fixtures are of medium grade and cost, supplied with cold and hot water from gas heater and furnace connections.

A hot air furnace of ample size supplies heat to all rooms, including servant's room in the third story.

The house will cost from $6,500 to $7,500, according to the quality of materials used and the price of labor.

The house on pages 118 and 119 is from the designs of James T. Ball of Boston, Mass.

It was designed primarily for a corner lot, but would do splendidly on an ordinary broad one. The front entrances and piazzas are entirely separate, as are also the rear entrances. Special attention is called to this point in this design, namely: that there is no common staircase whatsoever in the entire house; even the cellars have their separate stairs and are completely divided, also there is no long back stairway to be used, the first floor occupants going no higher up than the second story, and doing that by a private stair. This arrangement has become universal in this type in Boston and vicinity. The living-rooms are well connected and the kitchen is reached through the pantry, a feature which pleases many. There is also a kitchen closet for pots, pans, etc. Refrigerators are located close to rear doors. Baths are well apart from other rooms. The third floor is especially roomy, giving four large chambers, the front chamber being 13 by 16 feet six inches, with ceiling being full height throughout. Rear chamber has a closet large enough for a dressing or sewing-room. These apartments will rent for $45 and $55 per month, and the building can be built for $7,500 with hot water heat and first class plumbing.

The house on page 121 is a two family house, designed by Edwy E. Benedict of Waterbury, Conn.

While this house is intended for a narrow lot, yet the entrances are entirely separate, both on the front and rear, and very complete isolation has been secured.

The third or attic floor is divided between the two families. The cellar is also divided and separate heating plants provided.

The view across the top of pages 122 and 123 is of a block of seven houses erected at Port Sunlight, near Liverpool, England,

from the designs of Wilson & Talbot, English architects, for the Messrs. Lever Bros., manufacturers of Sunlight Soap.

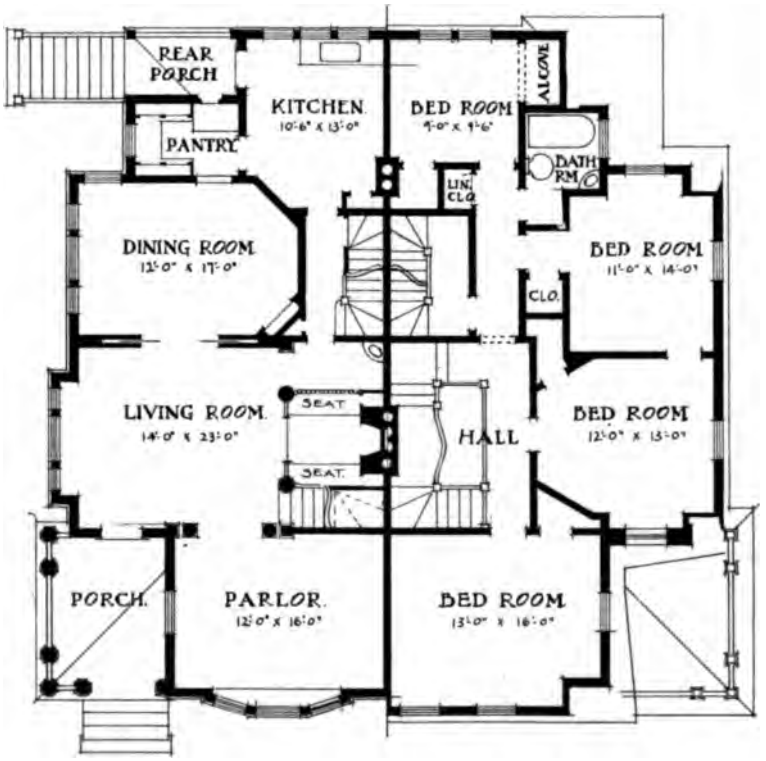
The village where these houses were erected was established by this firm and these houses and many others built for the use of the workmen employed in their factory.

They give a good example of what may be accomplished by skilled architects even when economy demands low cost and moderate accommodations.

The three family house on page 125 was designed by John P. Kingston, architect, of Worcester, Mass.

It has five rooms in each apartment besides halls, entries, bathrooms, pantries and closets. Each family has a veranda or balcony at the front and a platform at the rear. The three tenements are about alike, so only the first floor plan is given. As the picture shows, the house is roofed over with a gambrel roof with the top tenement in the upright part of it. Some might think that the roof would cut into the rooms, but it is not so; each room is perfectly straight up on all sides and the top tenement is just as desirable as the others. The attic or upper part of the roof is all floored over and is used for storage purposes. While the tenements are not quite so large or costly as the design on page 39 by the same architect, they are very convenient and desirable and the revenue from a house like this is more according to the cost in some localities than the two family house.

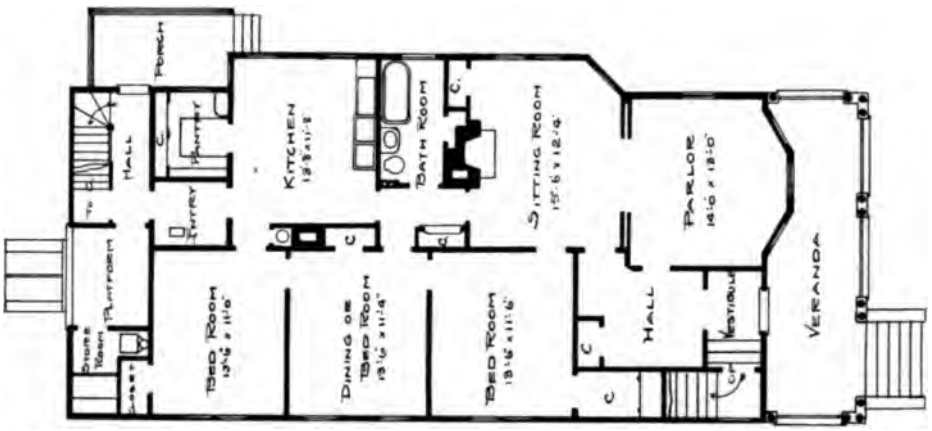
On pages 126 and 127 is shown a two family house from designs of J. S. Kennedy, architect, of Brooklyn, N. Y. This house was erected at 57 Turner Place, Brooklyn, N. Y., for Mr. W. M. Taylor and is a good example of the class of houses being erected in the suburbs of Brooklyn. It has hardwood trim throughout and cost $6,500. We give the four floor plans and an exterior and interior view.



FIRST FLOOR. SECOND FLOOR.

TWIN HOUSES, WATERBURY, CONN.

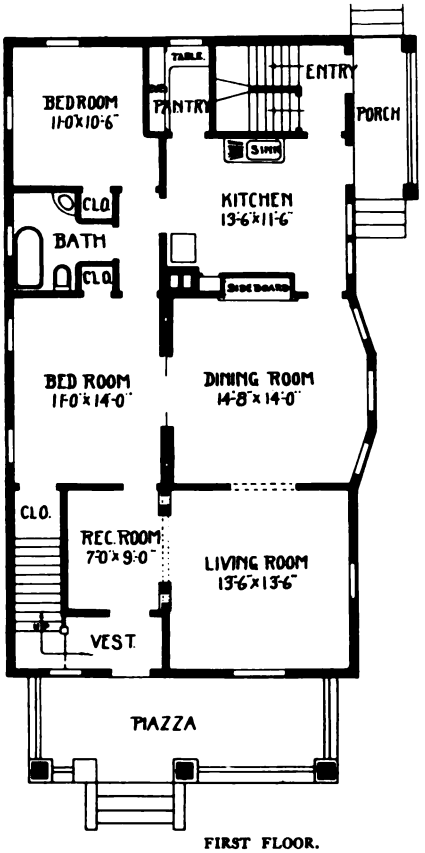
Griggs & Hunt, Architects.

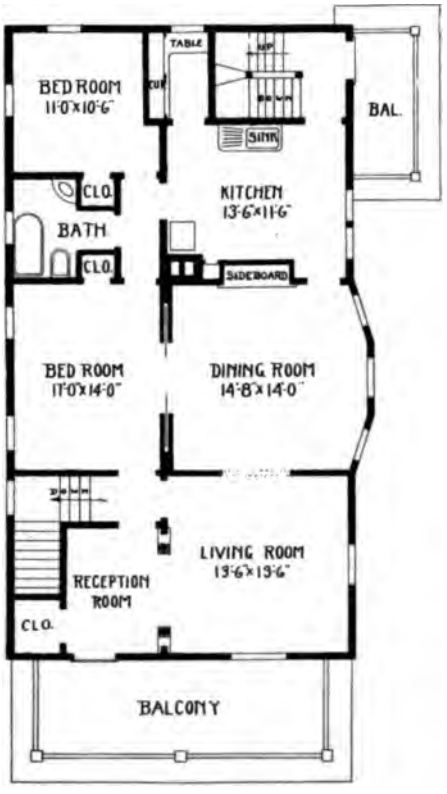


FIRST FLOOR.

TWO FAMILY HOUSE, WORCESTER, MASS.

John P. Kingston, Architect.

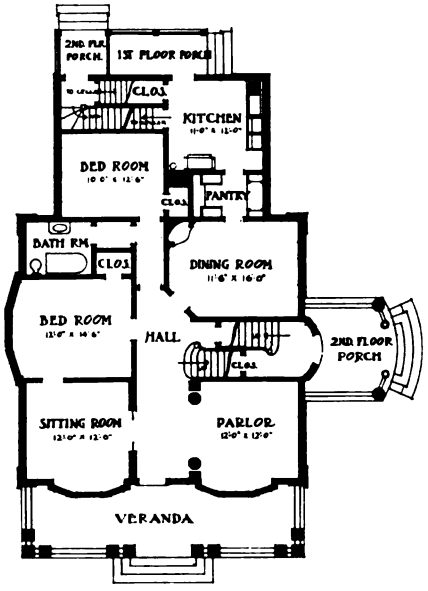


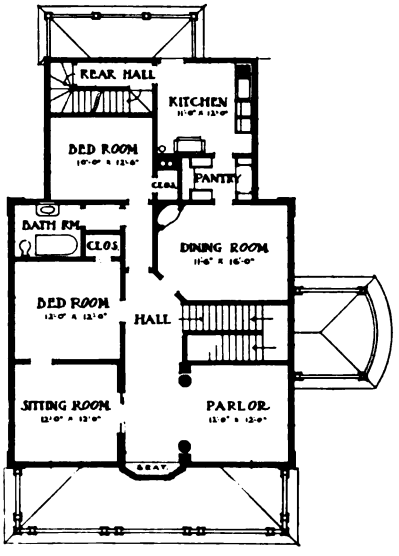


FIRST FLOOR. SECOND FLOOR.

TWO FAMILY HOUSE, MINNEAPOLIS, MINN.

Glenn L. Saxton, Architect.



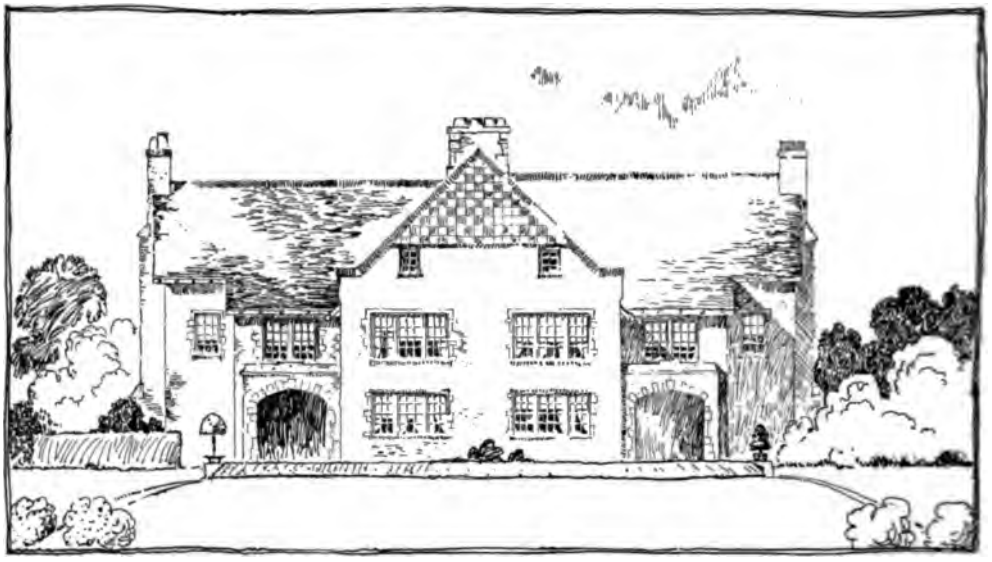


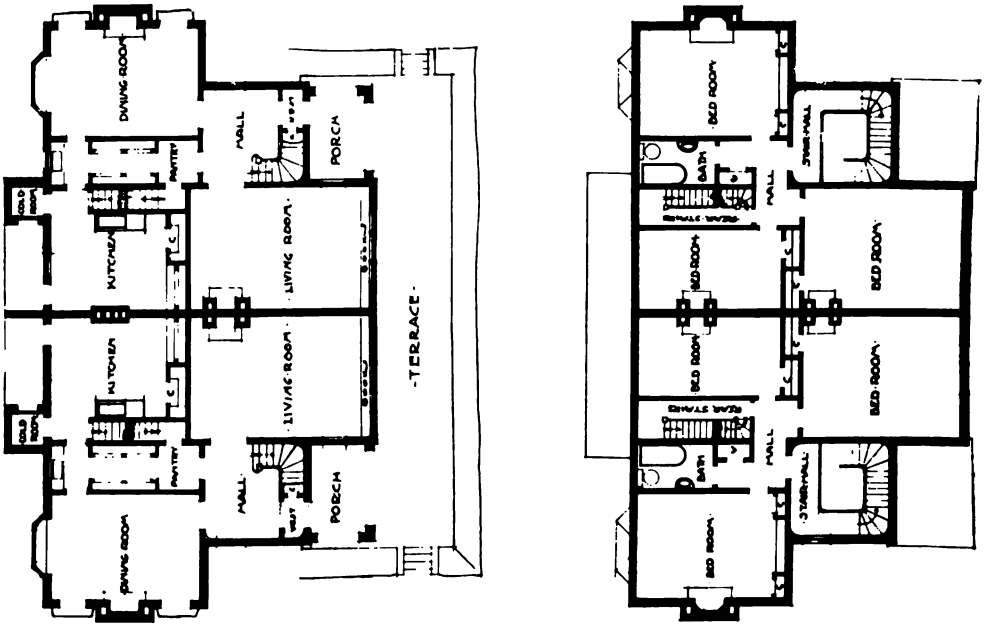
FIRST FLOOR PLAN

SECOND FLOOR PLAN.

TWO FAMILY HOUSE, WATERBURY, CONN.

Griggs & Hunt, Architects.

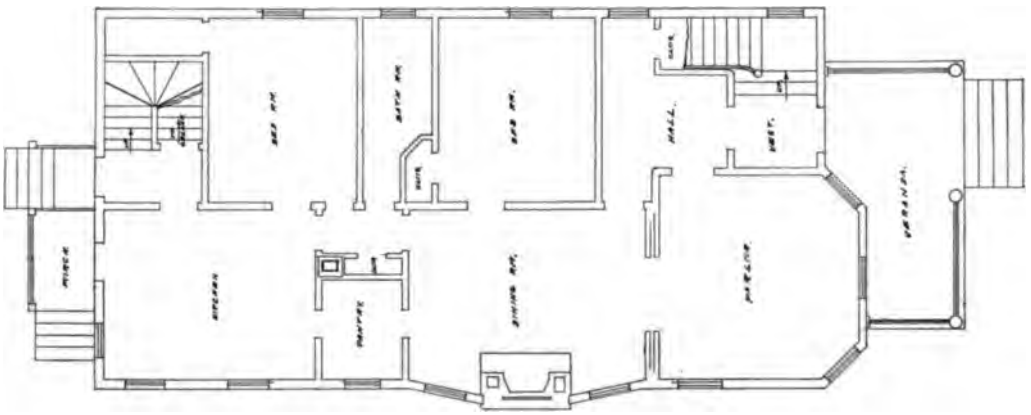




FIRST FLOOR. SECOND FLOOR.

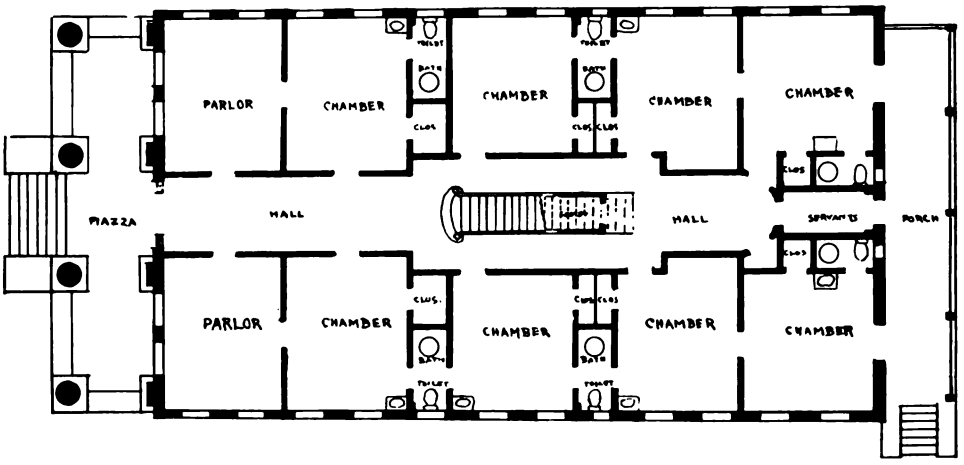
TWIN HOUSES, OAKMONT, PA.

D. A. Crone, Architect.



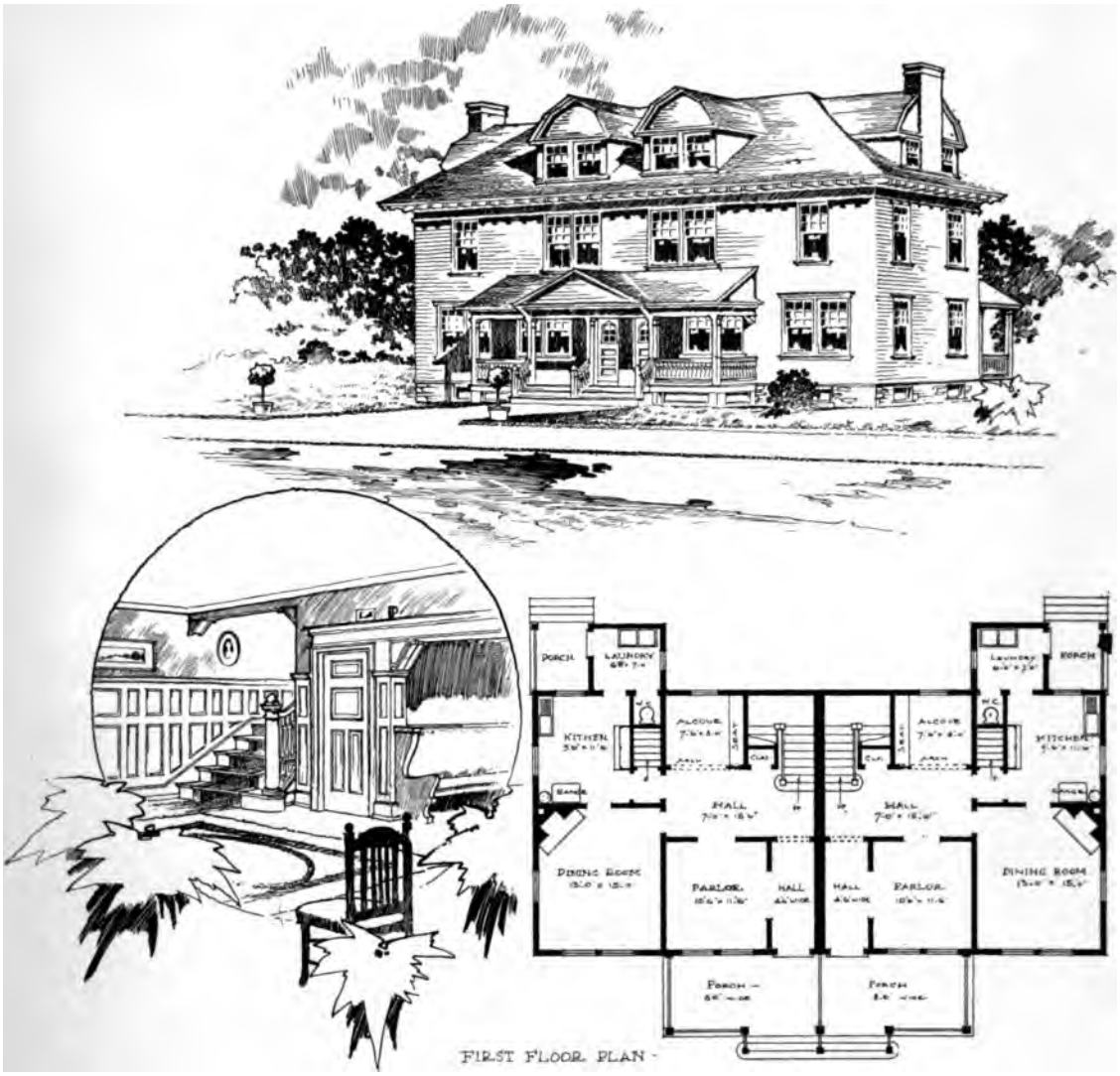
THREE FAMILY HOUSE, WATERBURY, CONN.

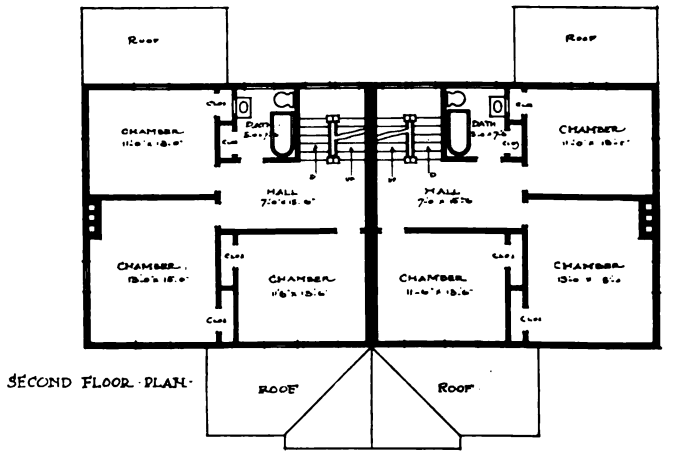
Edw. E. Benedict, Architect.



MIRRAMAR APARTMENT HOUSE, PORTO RICO.

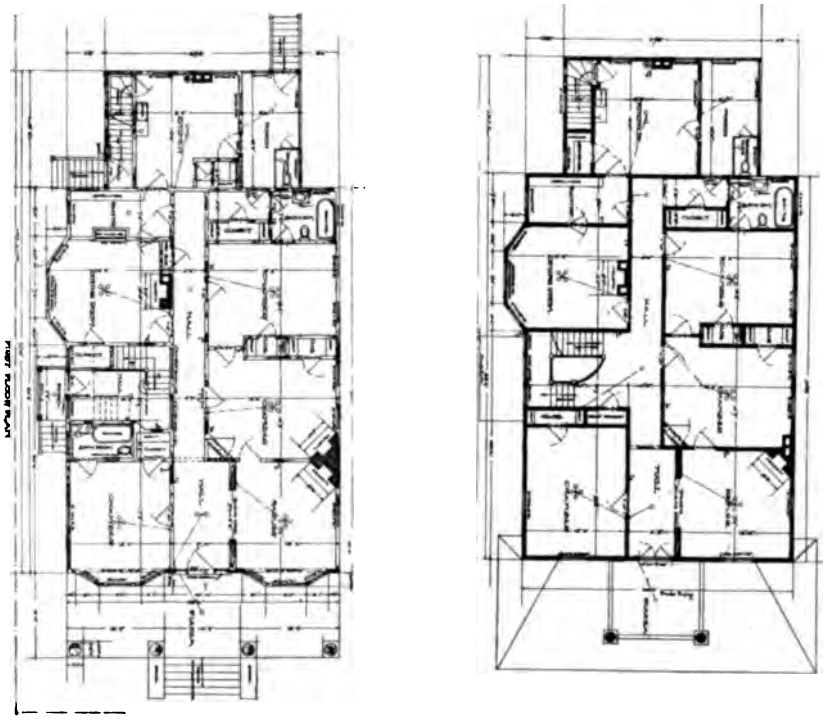
Antonin Nechodoma, Architect.





TWIN HOUSE.

C. E. Schermerhorn, Architect.

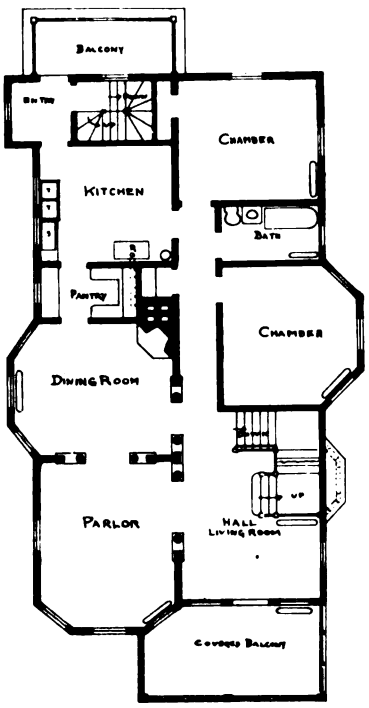


FIRST FLOOR. SECOND FLOOR.

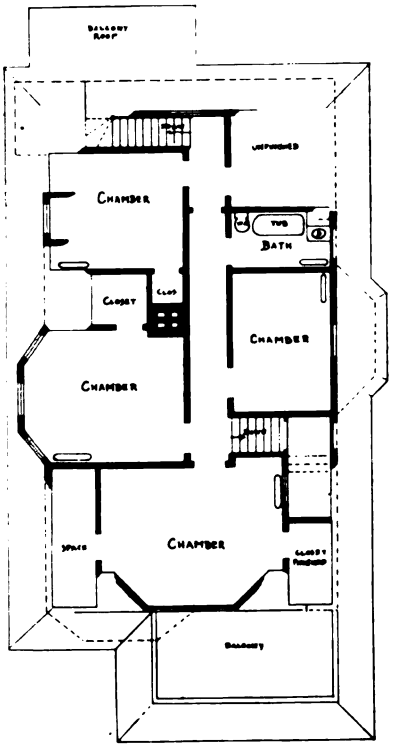
TWO FAMILY HOUSE, JACKSONVILLE, FLA.

McClure & Holmes, Architects.

SIDE VIEW, SHOWING BAY WINDOW



SECOND FLOOR.

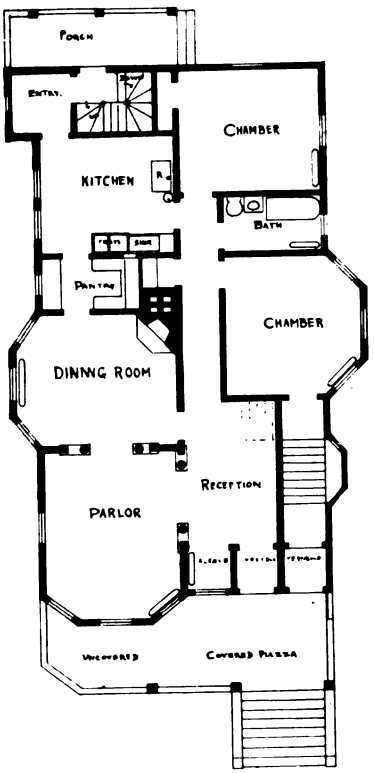


THIRD FLOOR.

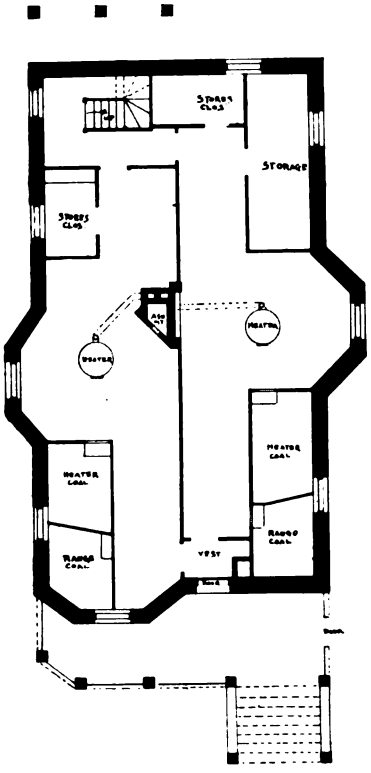
TWO FAMILY HOUSE, WINTHROP HIGHLANDS, MASS.

Albert Winslow Cobb, Architect.

SIDE ELEVATION.



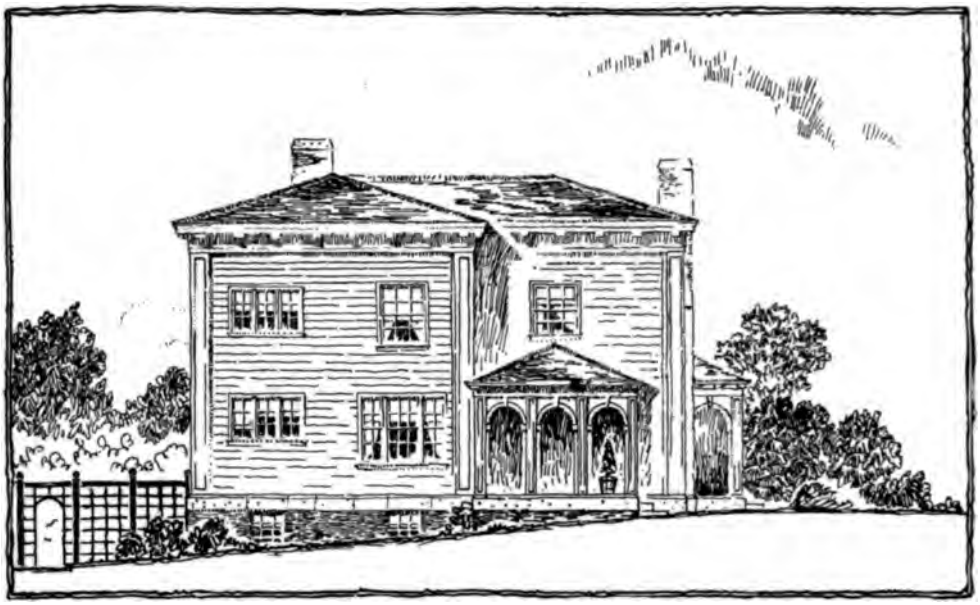
FIRST FLOOR.

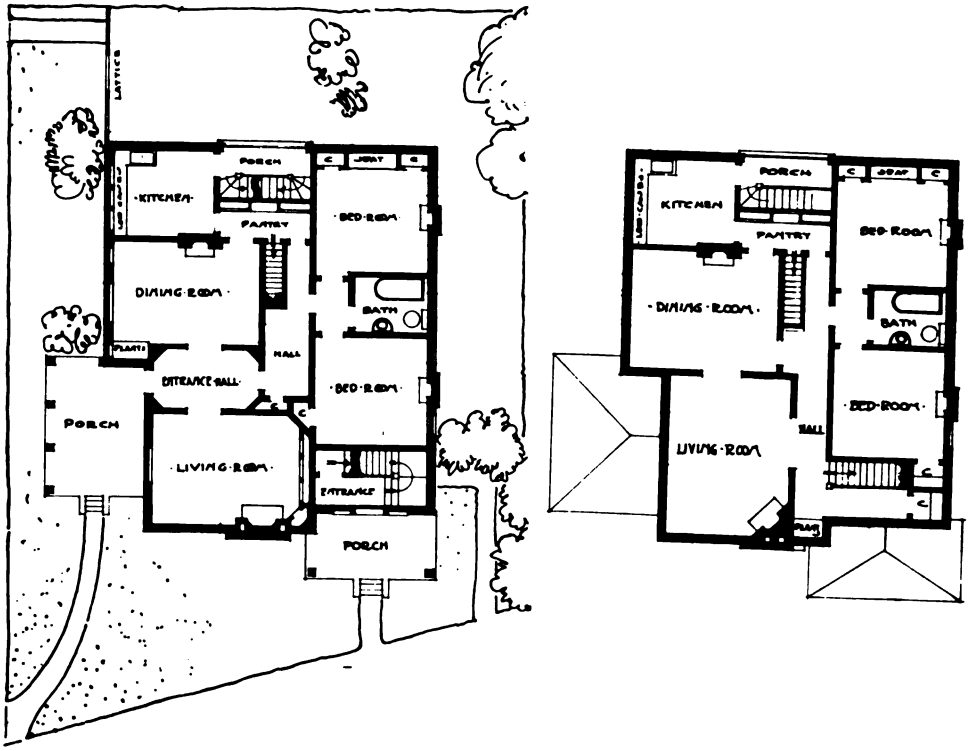


CELLAR PLAN

TWO FAMILY HOUSE, WINTHROP HIGHLANDS, MASS.

Albert Winslow Cobb, Architect.

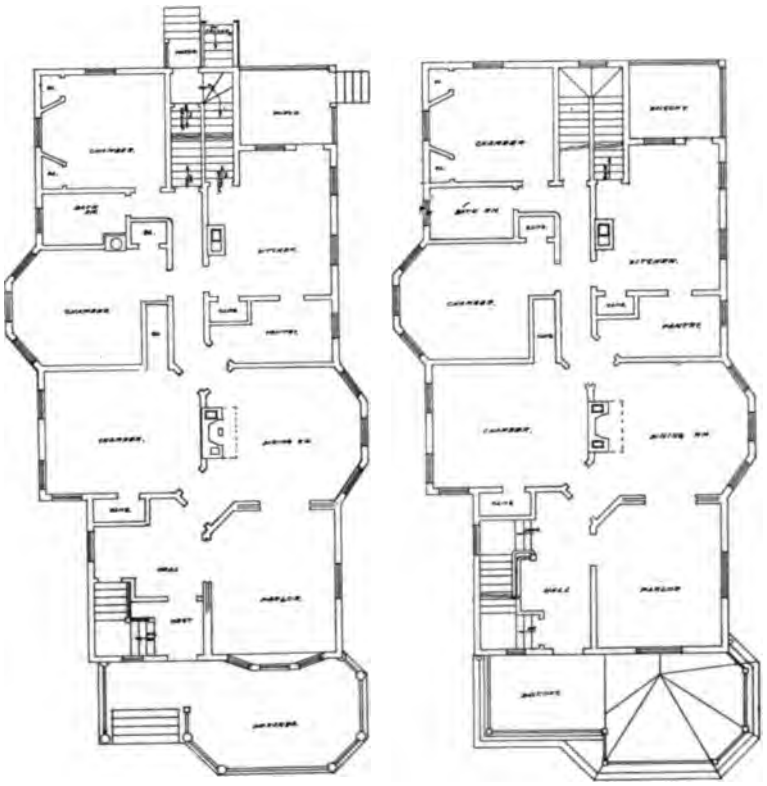




PLOT OF LOT AND FIRST FLOOR. SECOND FLOOR.

TWO FAMILY HOUSE, WILKINSBURGH, PA.

D. A. Crone, Architect.

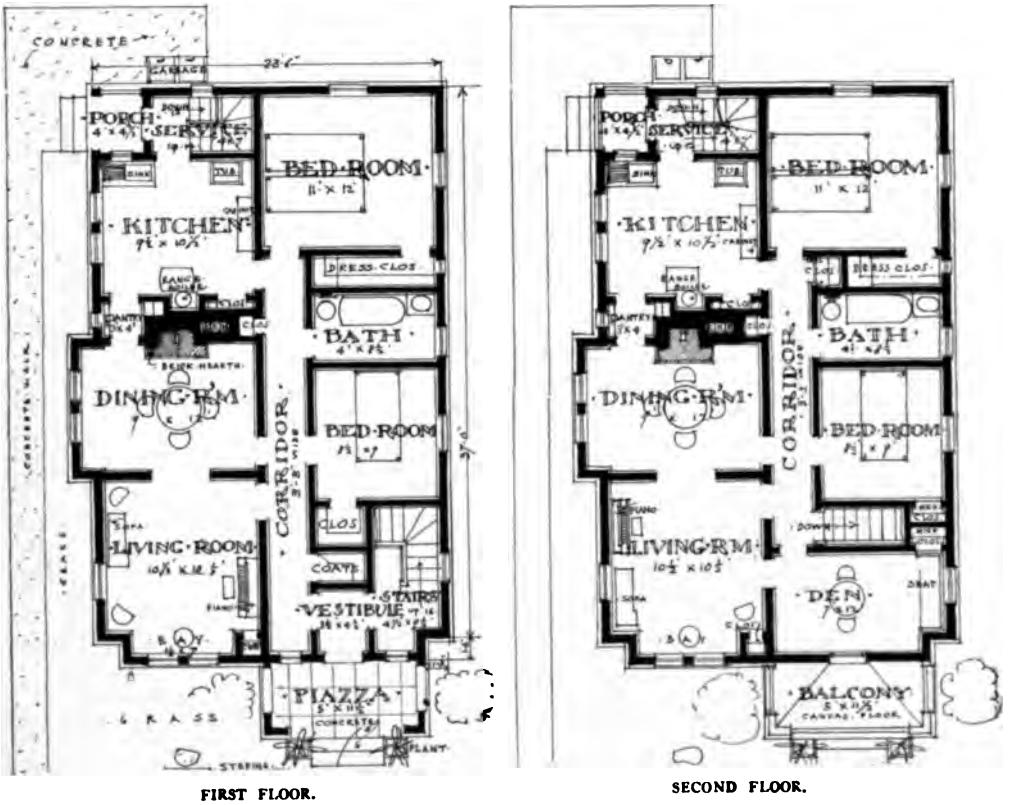


FIRST FLOOR. SECOND FLOOR.

TWO FAMILY HOUSE, WATERBURY, CONN.

E. E. Benedict, Architect.

GARDEN

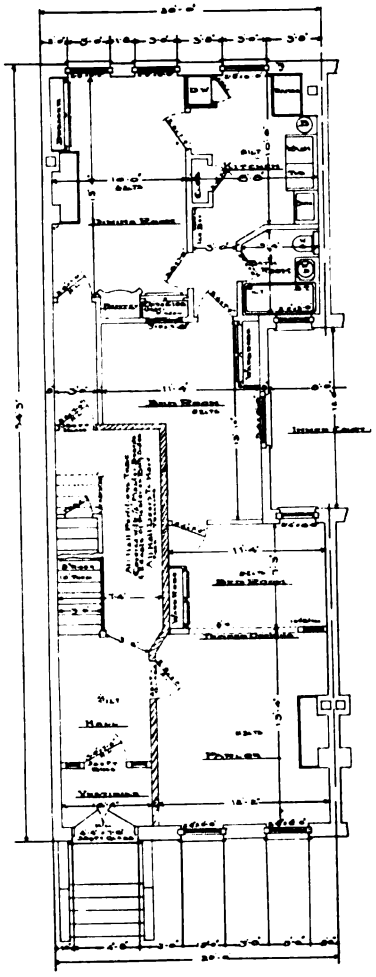


FIRST FLOOR.

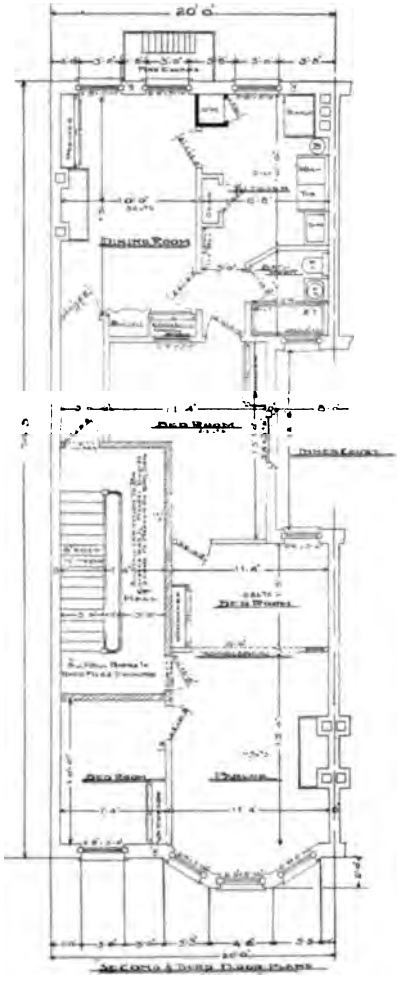
SECOND FLOOR.

A $3800 TWO FAMILY HOUSE, BOSTON, MASS.

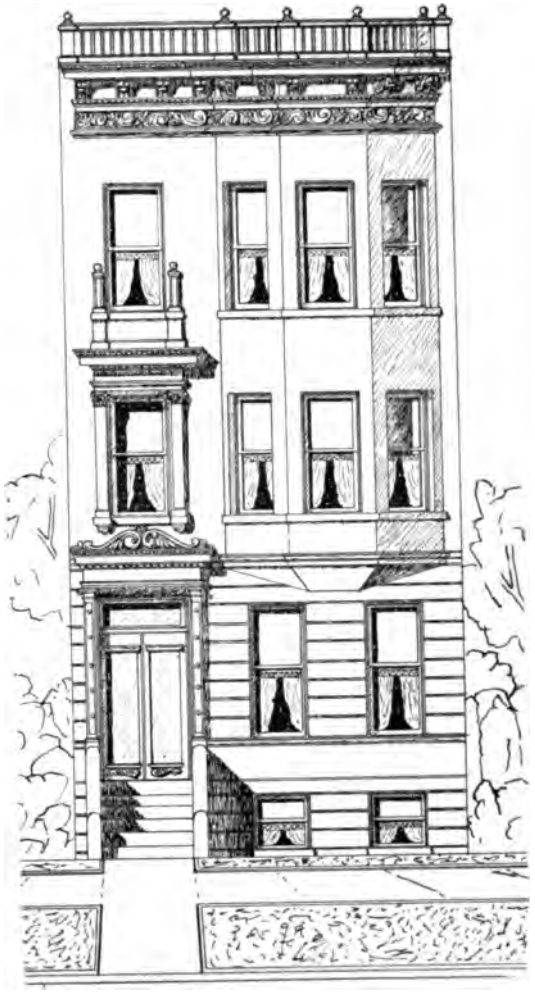
Homer Kiessling, Architect.



FIRST FLOOR.



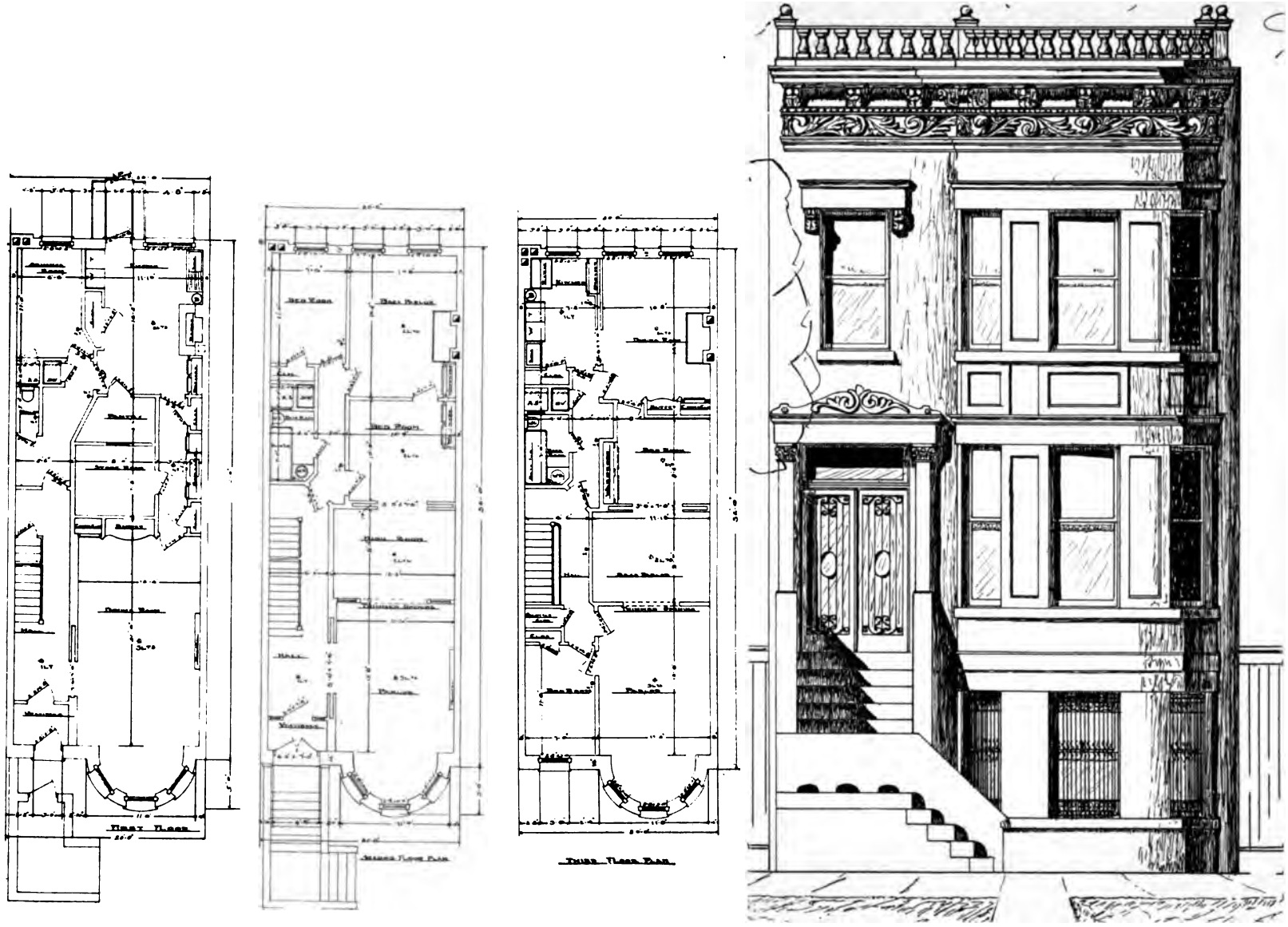
SECOND AND THIRD FLOORS.



FRONT ELEVATION.

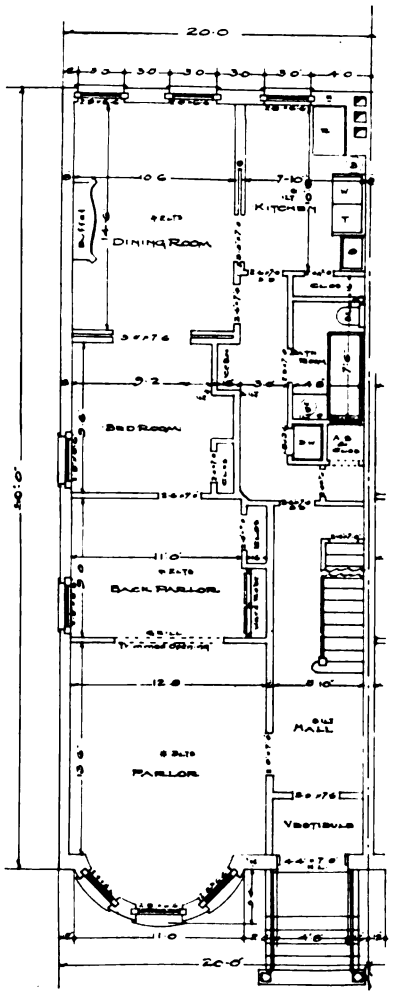
THREE FAMILY HOUSE, BROOKLYN, N. Y.

Thos. Bennett, Architect.

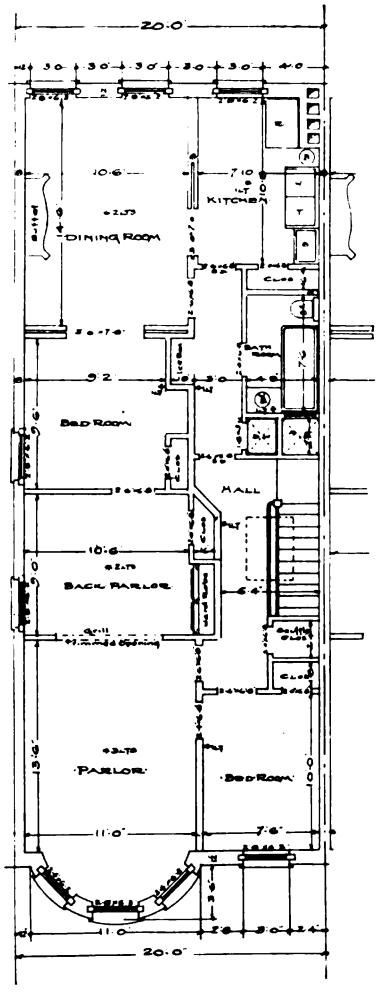


TWO FAMILY HOUSE, BROOKLYN, N. Y.

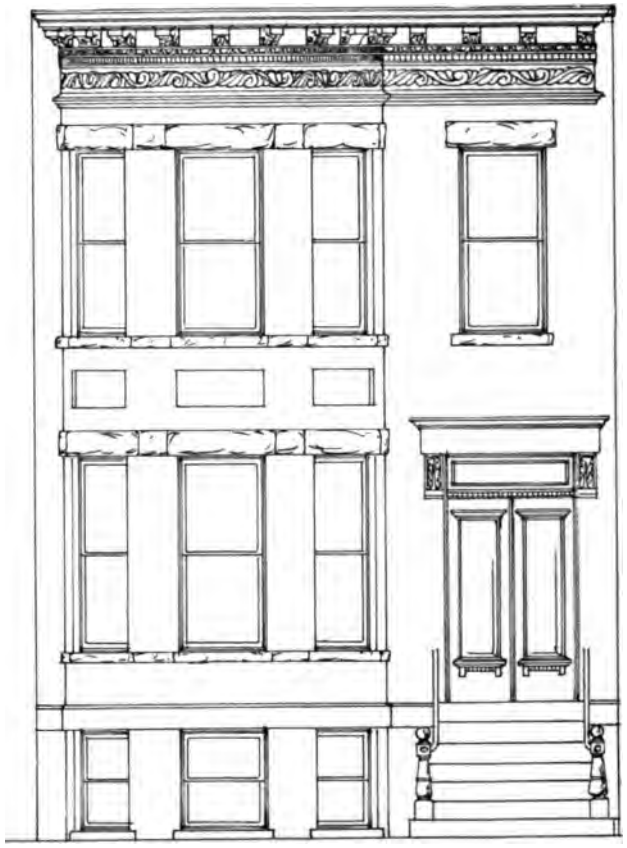
Thos. Bennett, Architect.



FIRST FLOOR.



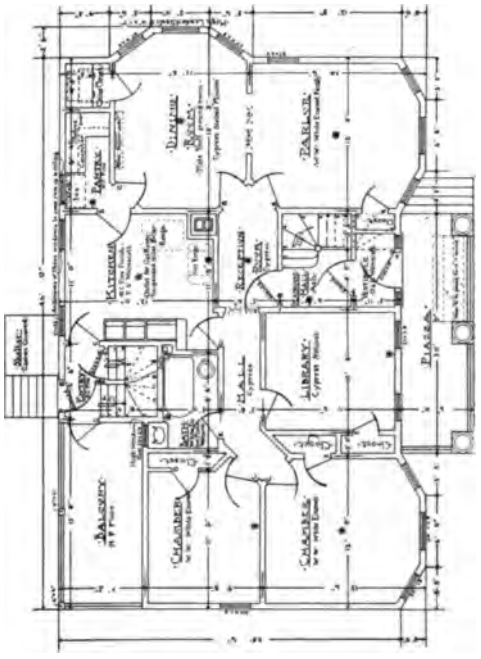
SECOND FLOOR.

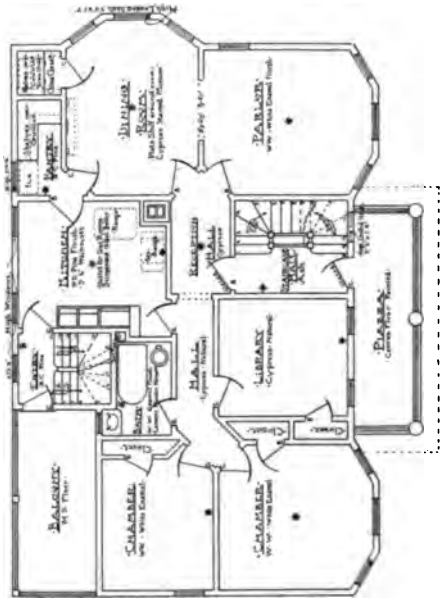


FRONT ELEVATION.

TWO FAMILY HOUSE, BROOKLYN, N. Y.

Henry Pohlmann, Architect.

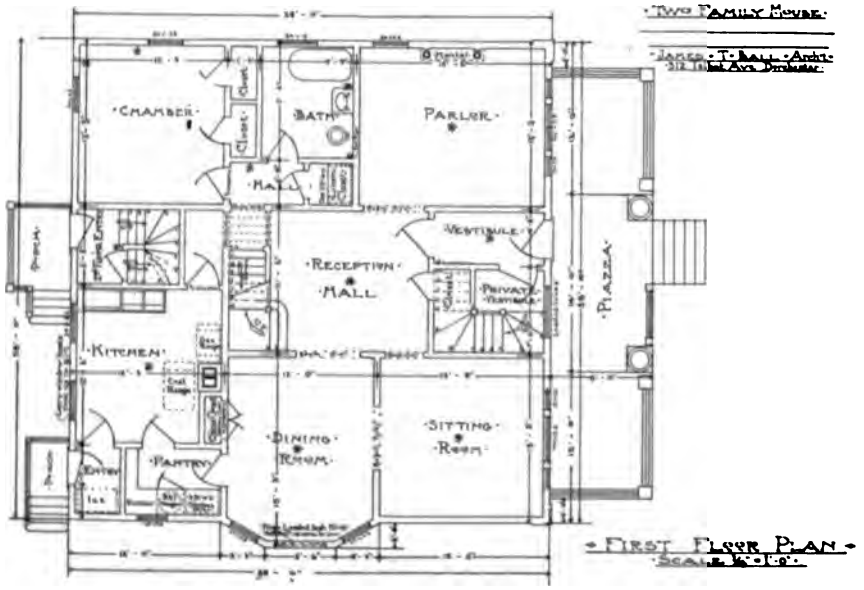




FIRST FLOOR. SECOND FLOOR.

THREE FAMILY HOUSE.

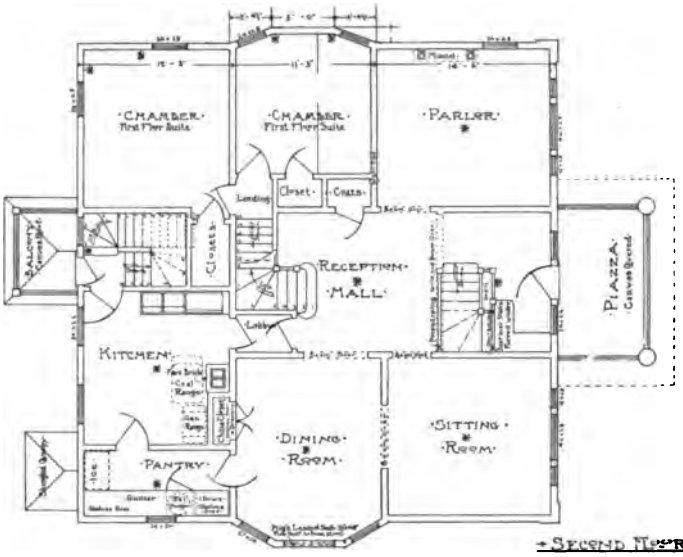
63 Jas. T. Ball, Architect.



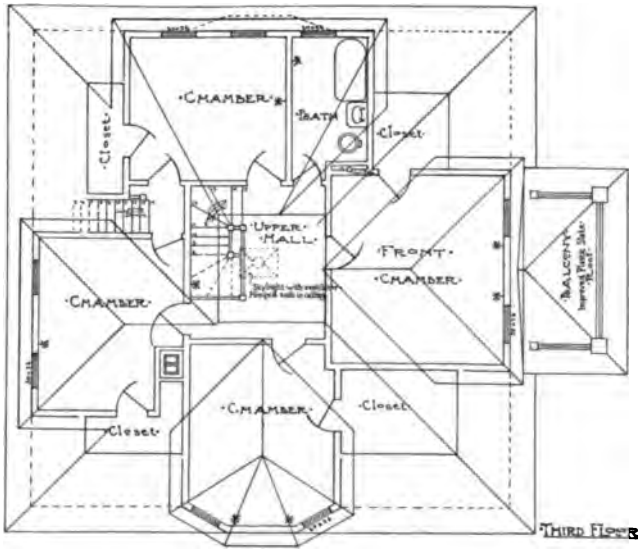
TWO FAMILY HOUSE.

Jas. T. Ball, Architect.

(See next page, second and third floors.)



SECOND FLOOR PLAN

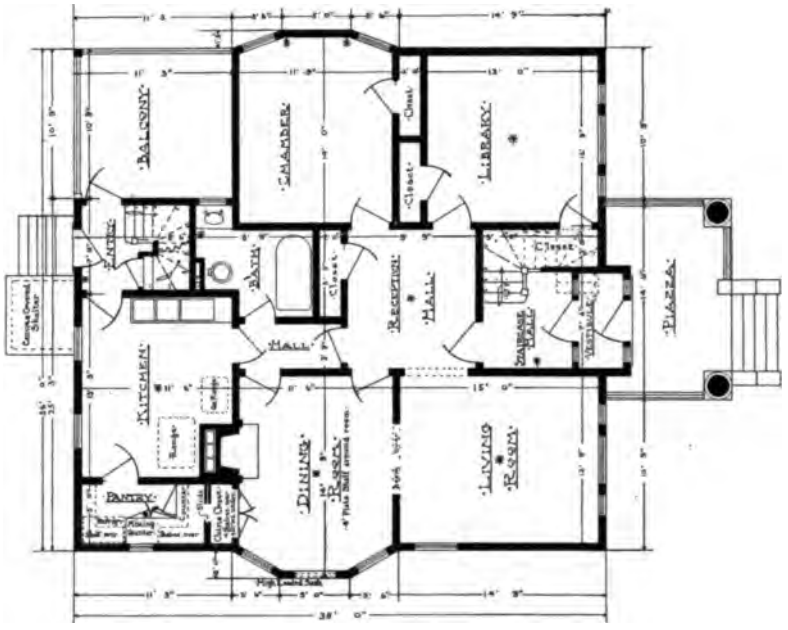


THIRD FLOOR PLAN

TWO FAMILY HOUSE.

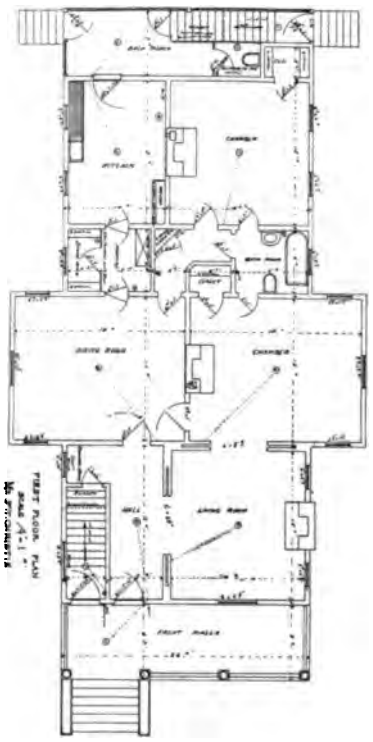
Jas. T. Ball, Architect.

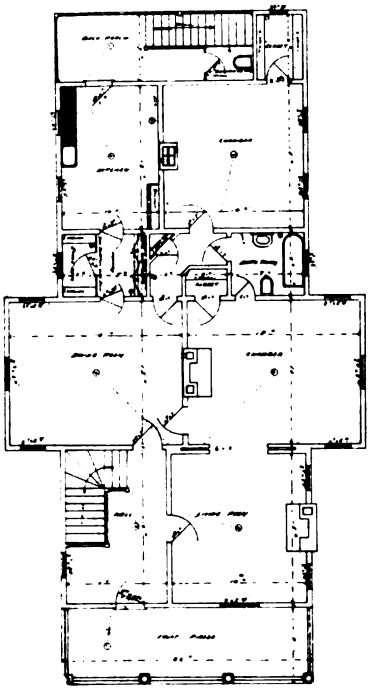
(See preceding page for view and first floor plan.)



THREE FAMILY HOUSE.

Jas. T. Ball, Architect.



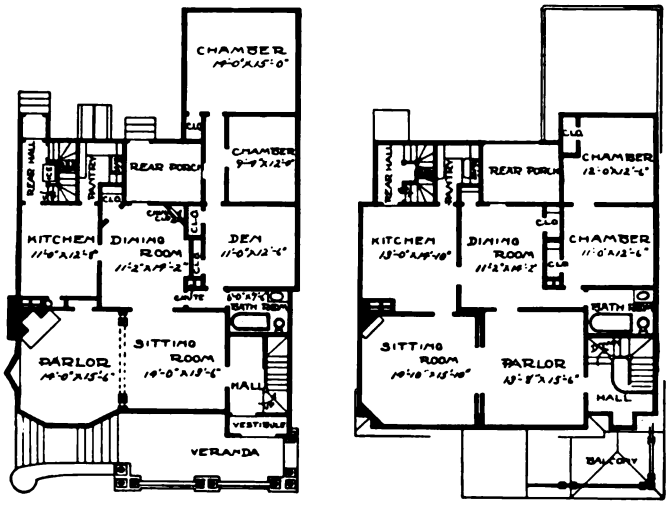


FIRST FLOOR.

SECOND FLOOR.

TWO FAMILY HOUSE, JACKSONVILLE, FLA.

McClure & Holmes, Architects.

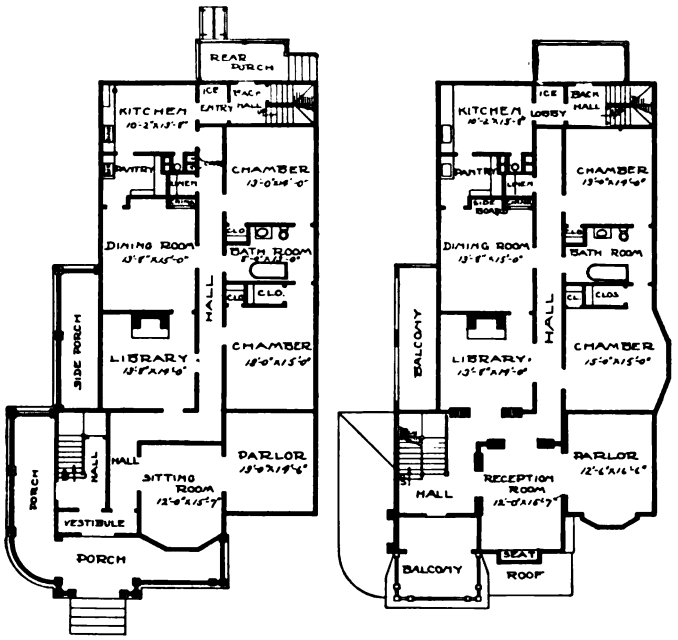


First Floor Plan

Second Floor Plan

TWO FAMILY HOUSE, NEW HAVEN, CONN.

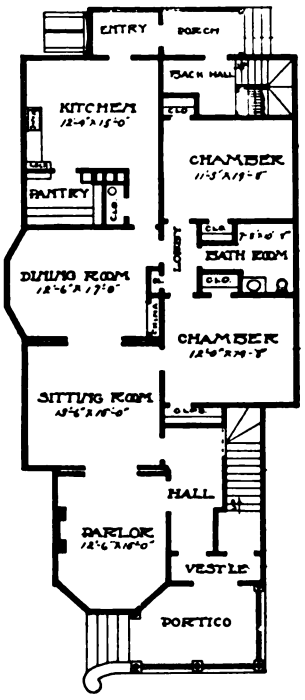
Brown & Von Beren, Architects.



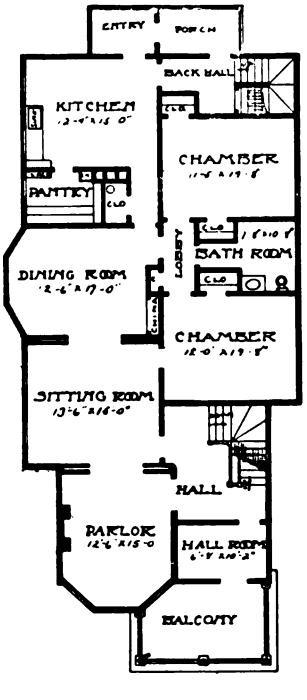
FIRST FLOOR PLAN SECOND FLOOR PLAN

TWO FAMILY HOUSE FOR MR. LOUIS M. SAGAL, NEW HAVEN, CONN.

Brown & Von Beren, Architects.



First Floor Plan

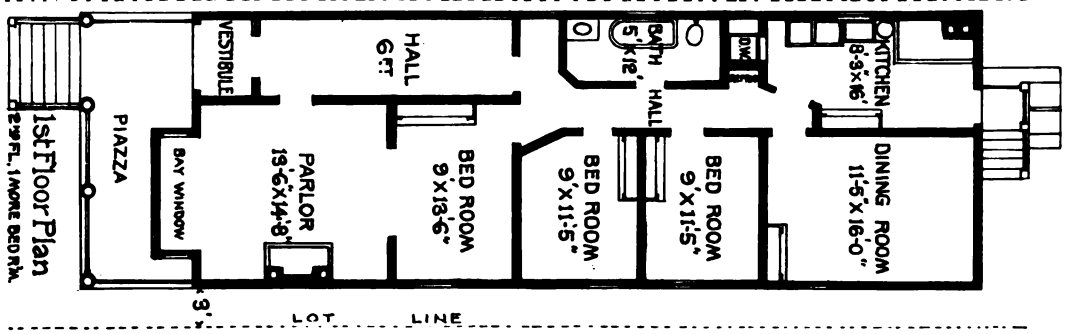


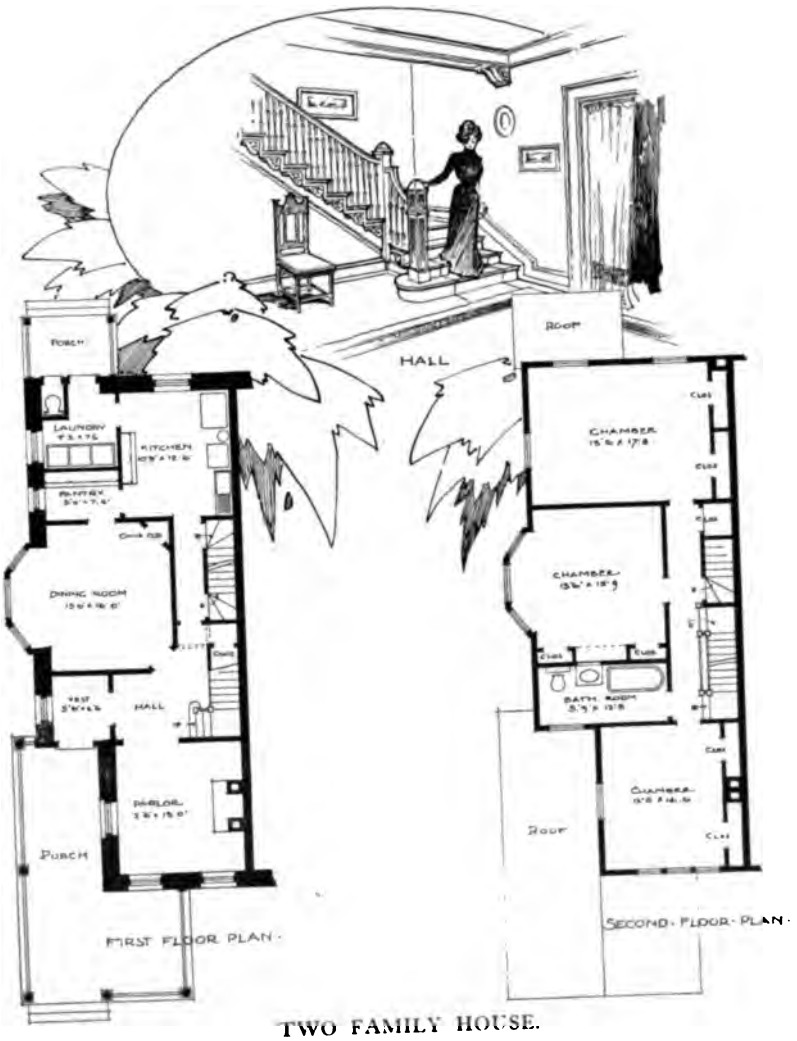
Second Floor Plan

TWO FAMILY HOUSE FOR MR. DAVID STEELE, NEW HAVEN, CONN.

Brown & Von Beren, Architects.

TWO FAMILY HOUSE ON BAINBRIDGE AVENUE, NEAR 194TH STREET,
BOROUGH OF BRONX, FOR MR. PHILIP McGOVERN.





TWO FAMILY HOUSE.

C. E. Schermerhorn, Architect.

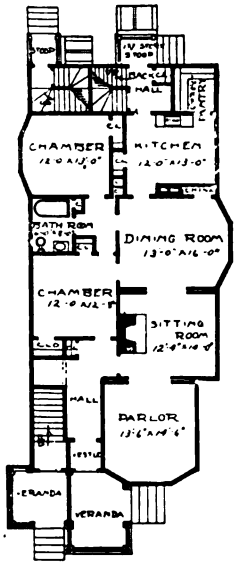
FIRST FLOOR PLAN
SCALE 1/8 IN. = 1FT

SECOND FLOOR PLAN
SCALE 1/8 IN. = 1FT

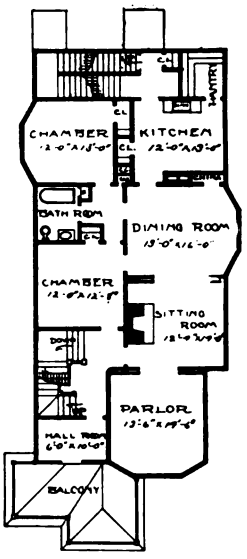
THIRD FLOOR PLAN
SCALE 1/8 IN. = 1FT

THREE FAMILY HOUSE, WATERBURY, CONN.

C. Jerome Bailey, Architect.



First Floor Plan

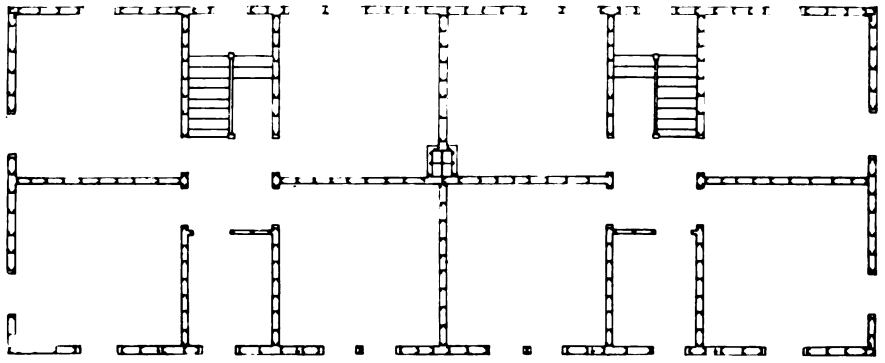


Second Floor Plan

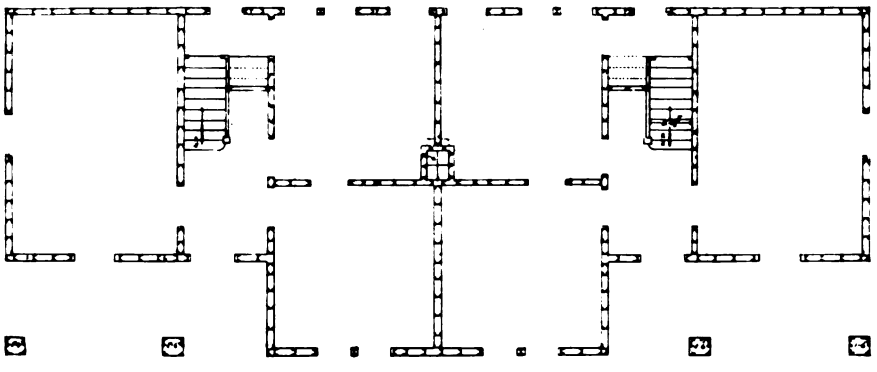
TWO FAMILY HOUSE FOR PHILIP FREZENIAS, NEW HAVEN, CONN.

Brown & Von Beren, Architects.

FRONT VIEW.



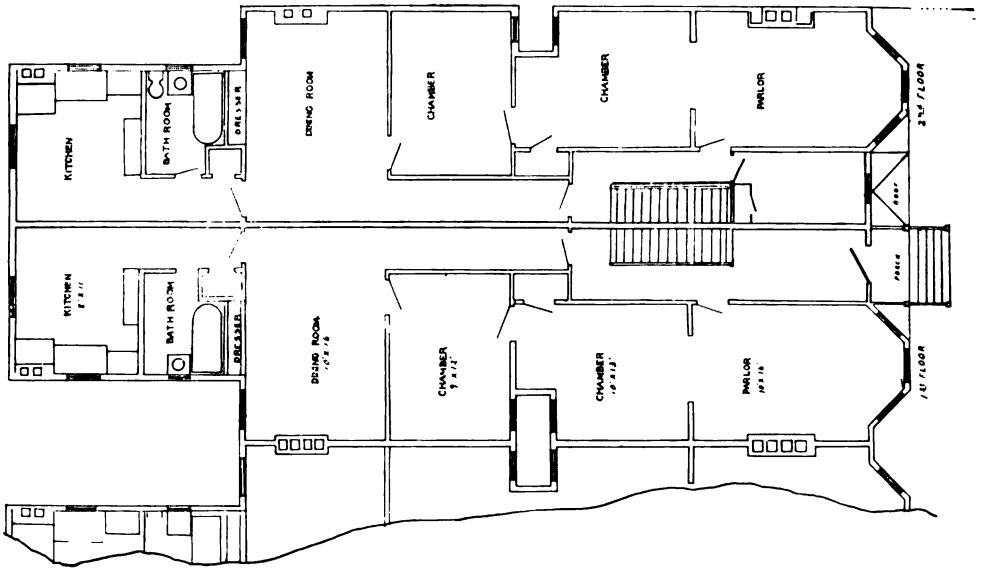
SECOND FLOOR PLAN.



FIRST FLOOR PLAN.

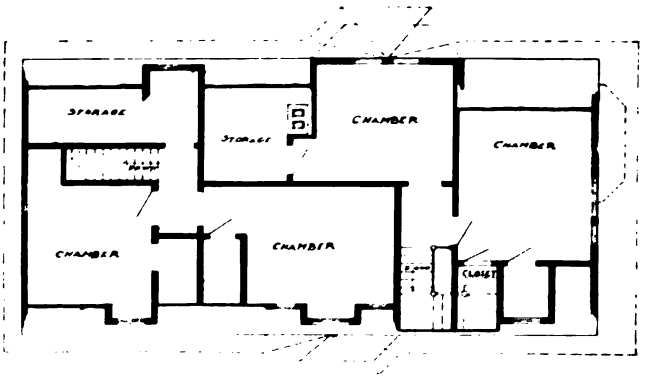
TWIN HOUSE AT TUXEDO PARK, N. Y., CONSTRUCTED OF METAL LUMBER AND CEMENT PLASTER ON METAL LATH.

Builders: The Taft-Howell Co. H. M. Naugle, Architect.
Metal Lumber: Berger Mfg. Co.

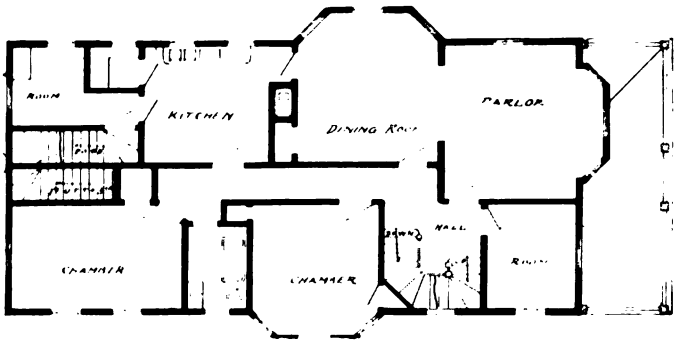


GROUP OF THREE TWO FAMILY HOUSES ON DECATUR AVENUE, BEDFORD PARK, N. Y.

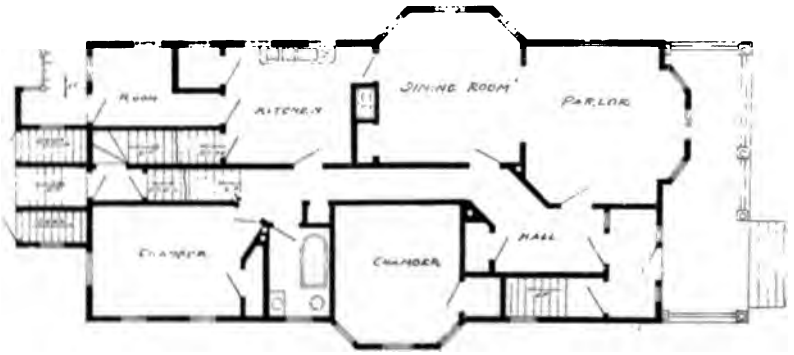
G. P. Muller, Builder.



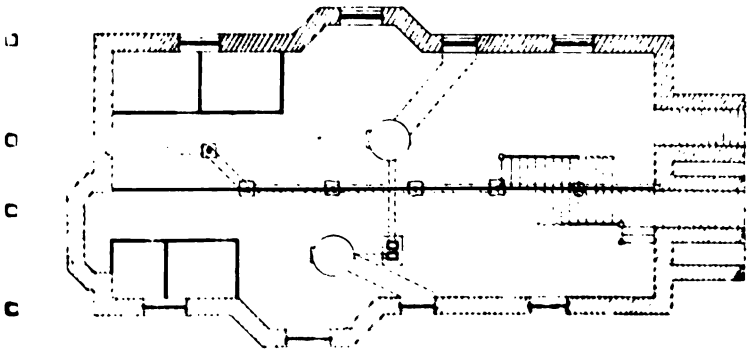
THIRD FLOOR.



SECOND FLOOR.



FIRST FLOOR.



CELLAR.

PLANS OF TWO FAMILY HOUSE.

Albert Winslow Co[illegible] rchitect.

REAR.

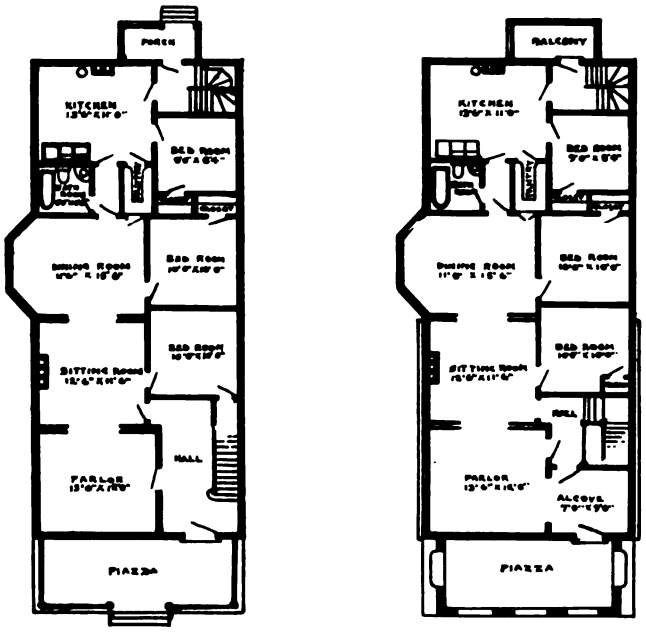
FRONT.

SOUTH SIDE.

NORTH SIDE.

ELEVATIONS TWO FAMILY HOUSE.

87 Albert Winslow Cobb, Architect.

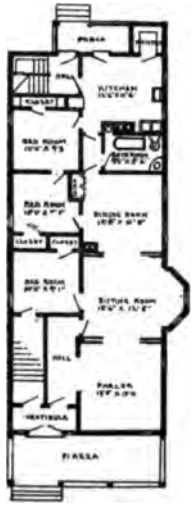


FIRST. FLOOR PLAN.

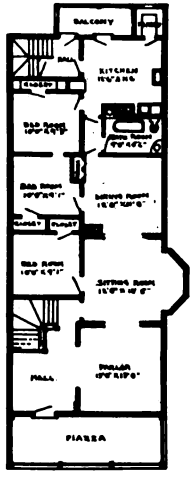
SECOND FLOOR PLAN.

TWO FAMILY HOUSE

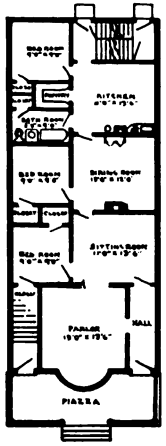
Ed. L. Davis, Architect.



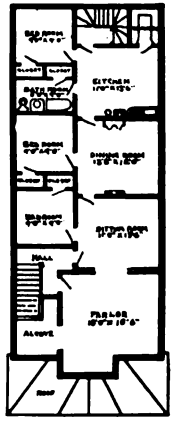
FIRST FLOOR PLAN.



SECOND FLOOR PLAN.



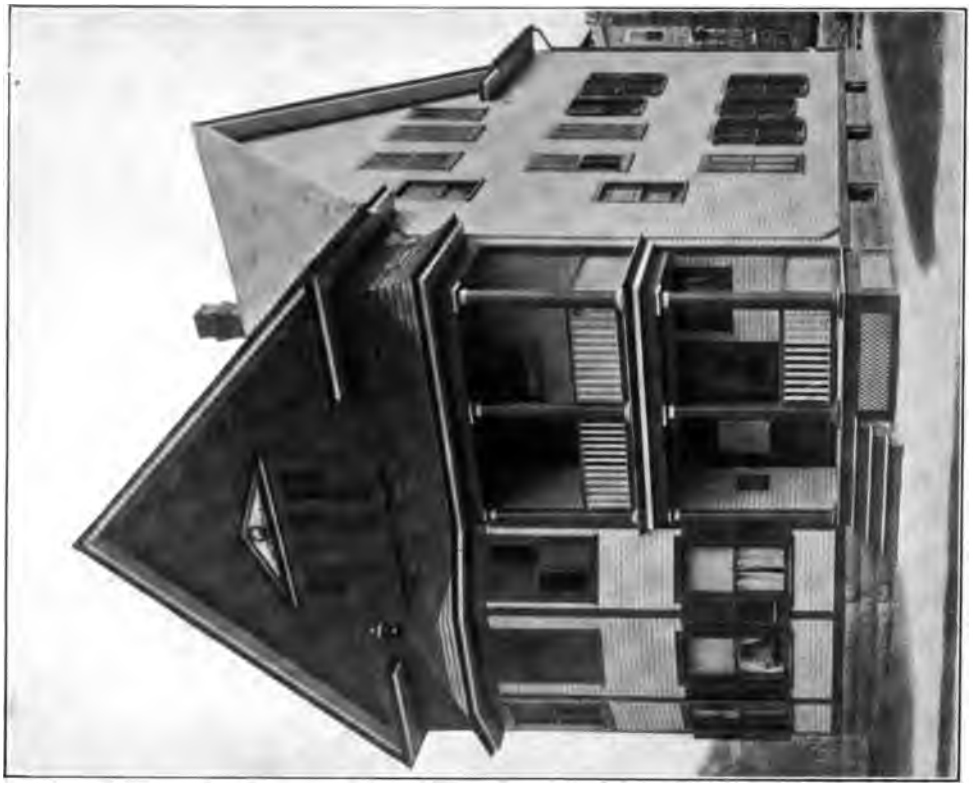
FIRST FLOOR PLAN.



SECOND FLOOR PLAN.

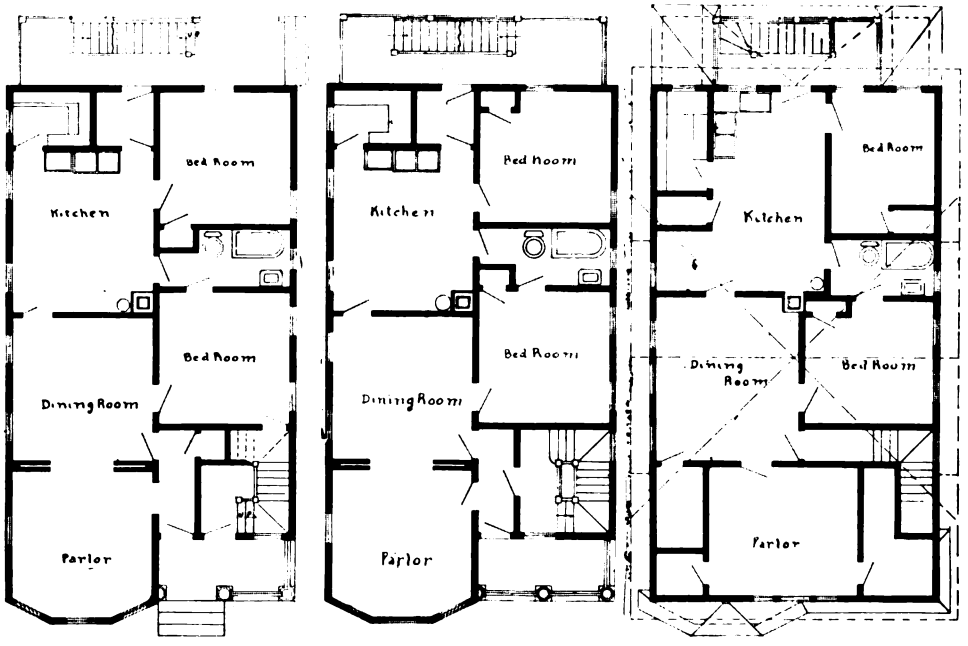
TWO FAMILY HOUSES.

Ed. L. Davis, Architect

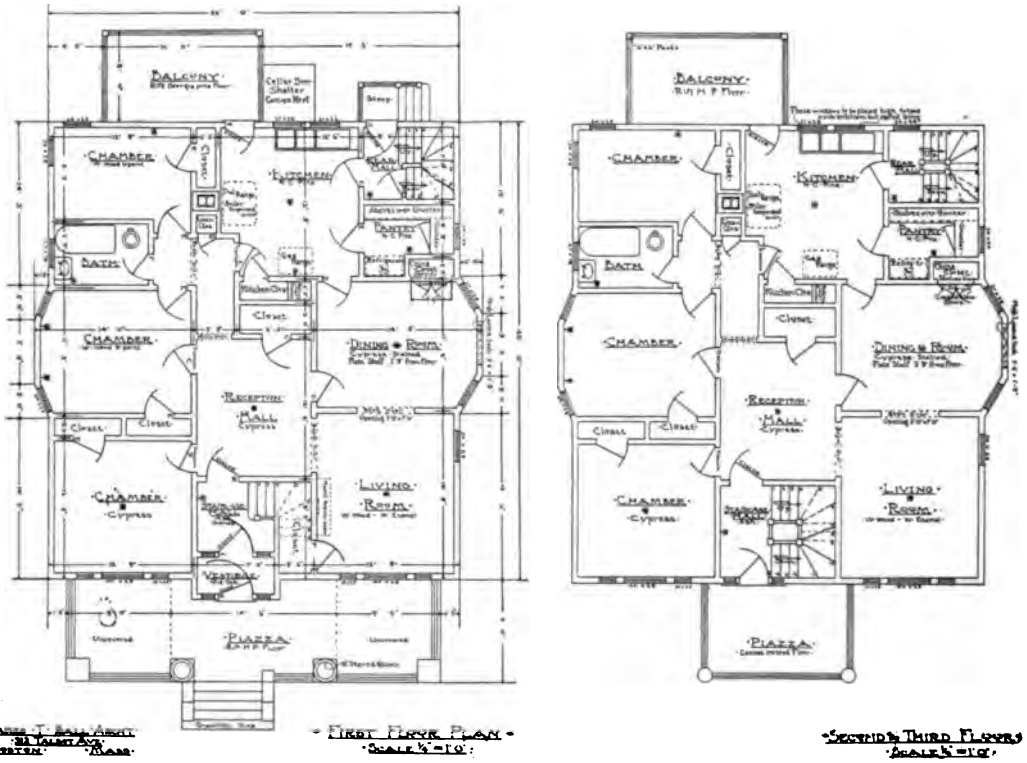


THREE FAMILY HOUSE, WATERBURY, CONN.

Freney & Jackson, Architects



FIRST FLOOR. SECOND FLOOR. THIRD FLOOR.



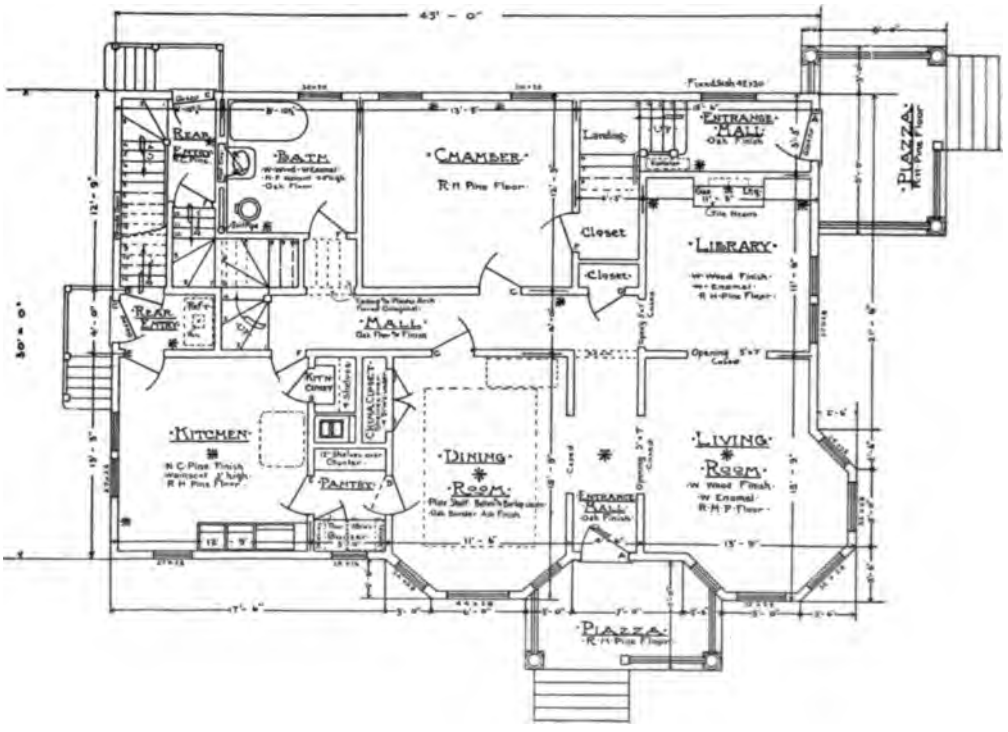
JAMES T. BALL, ARCHT. 31 TALBOT AVE. BOSTON, MASS.

FIRST FLOOR PLAN
SCALE ⅛" = 1'-0"

SECOND & THIRD FLOORS
SCALE ⅛" = 1'-0"

THREE FAMILY HOUSE, DORCHESTER, MASS.

Jas. T. Ball, Architect.

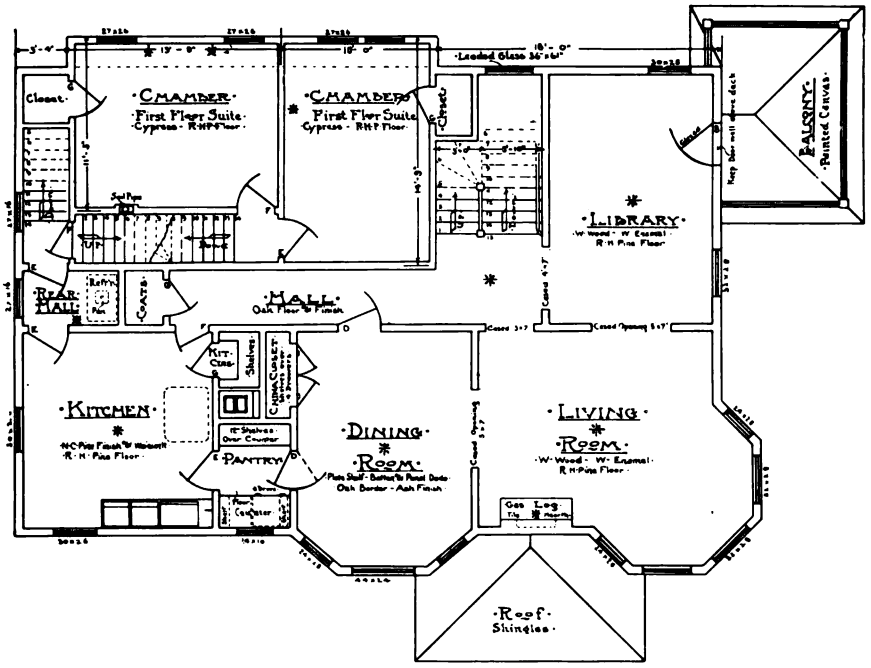


FIRST FLOOR.

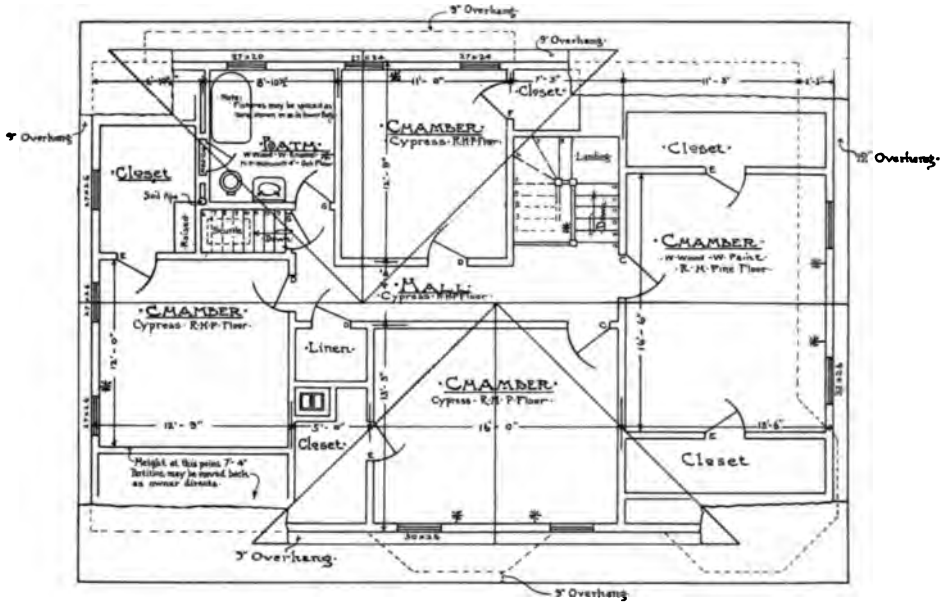
TWO FAMILY HOUSE.

Jas. T. Ball, Architect.

(See next page for second and third floors.)



SECOND FLOOR PLAN.



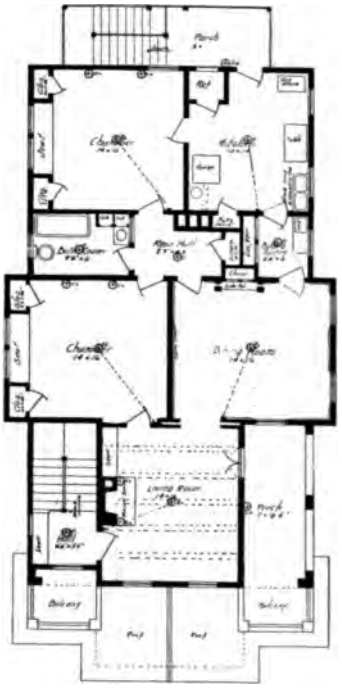
THIRD FLOOR.

TWO FAMILY HOUSE.

Jas. T. Ball, Architect.

(See last page for exterior and first floor.)

FIRST FLOOR.



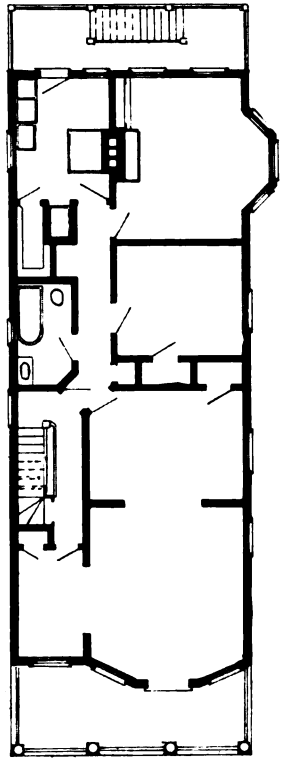
SECOND FLOOR.

DOUBLE HOUSE.

A. F. N. Everett, Architect.

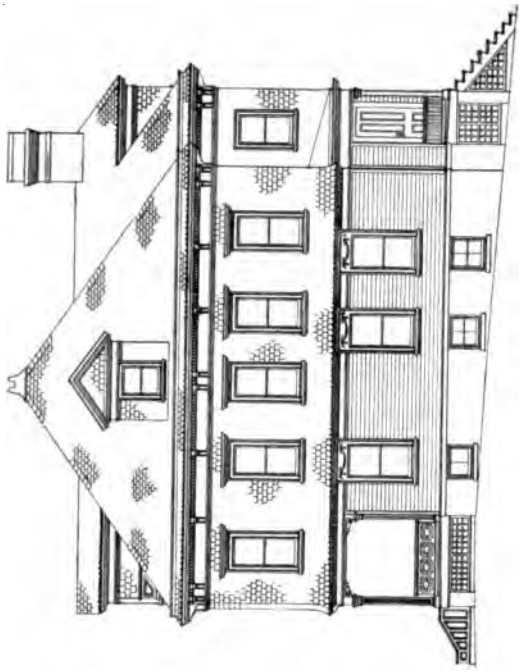
1st Floor Plan

2nd FL. 1 MORE BED RM.

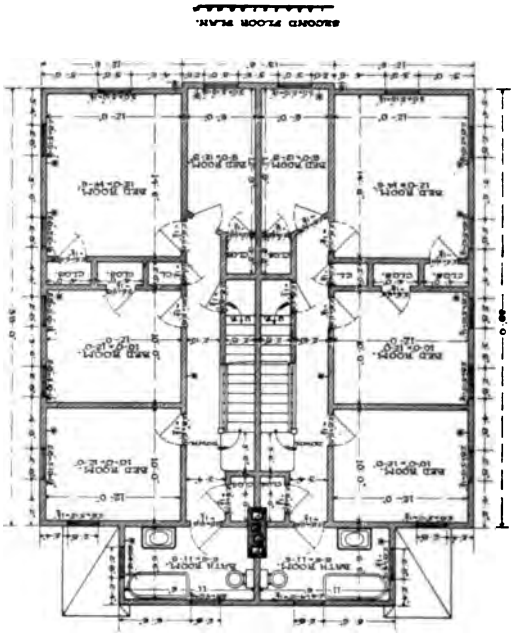


SECOND FLOOR.

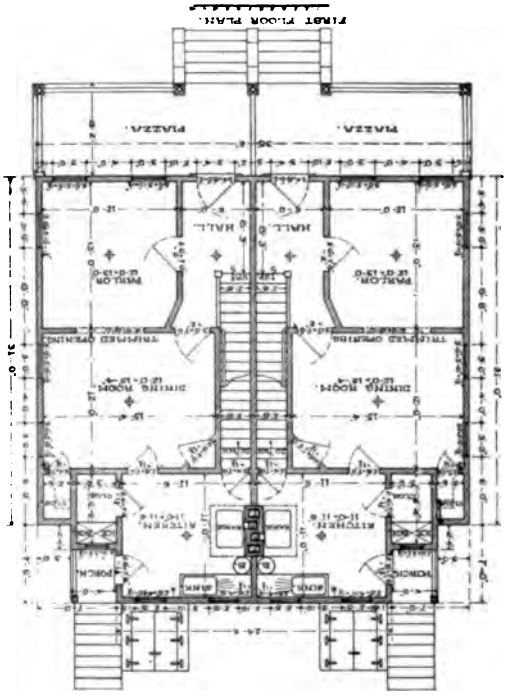
TWO FAMILY HOUSE, NEW ROCHELLE, N. Y.
Albert E. Davis, Architect.



SIDE ELEVATION.



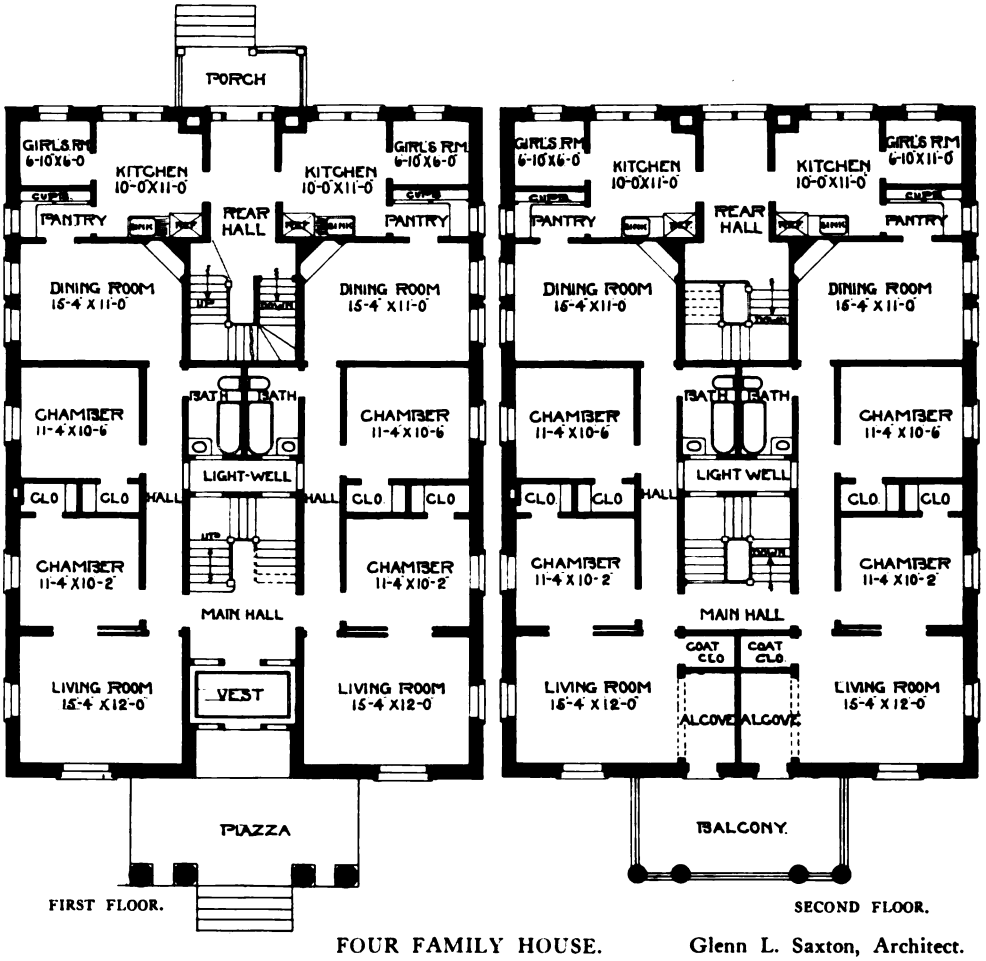
FRONT ELEVATION.



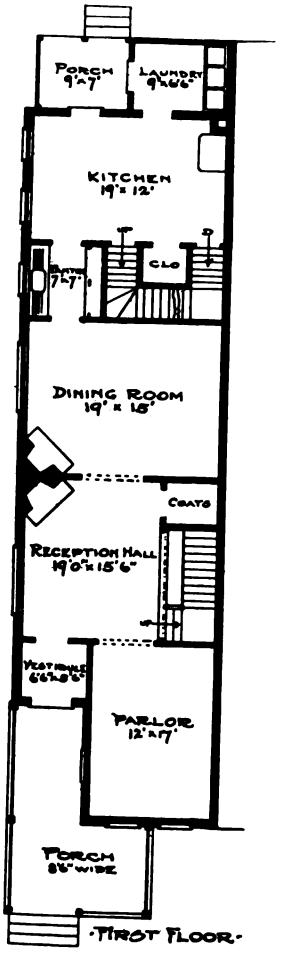
DOUBLE HOUSE

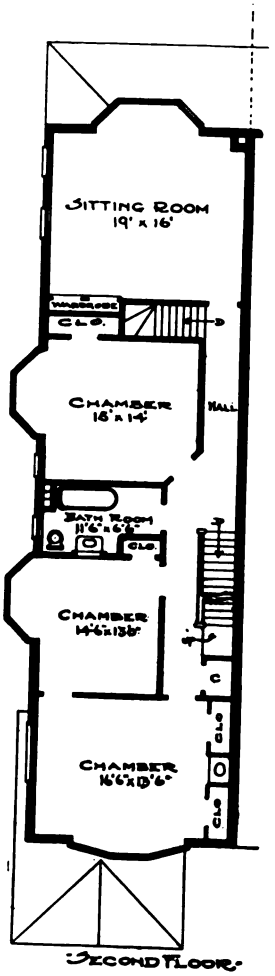
D. B. Provost, Architect.

TAYLOR APARTMENTS, ST. LOUIS, MO. A. B. Corwin, Architect.



FOUR FAMILY HOUSE. Glenn L. Saxton, Architect.





TWIN HOUSES.

C. E. Schermerhorn, Architect.

·BASEMENT · PLAN·

·FIRST · FLOOR · PLAN·

·SECOND · FLOOR · PLAN·

PLANS FOR A TWO FAMILY HOUSE, ST. CATHERINES, ONT., CAN.

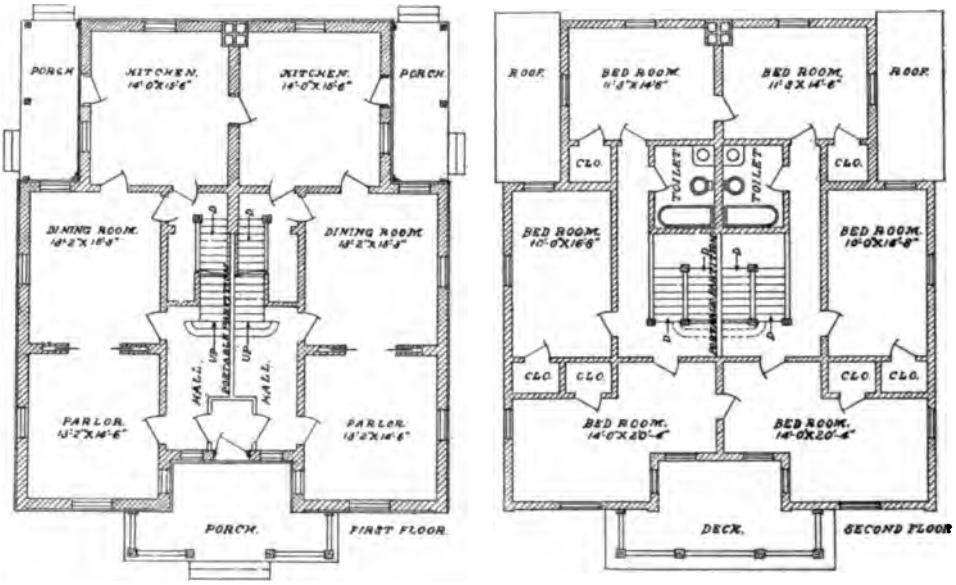
A. E. Nicholson, O. A. A., Architect.

·FRONT · ELEVATION·

·SIDE · ELEVATION·

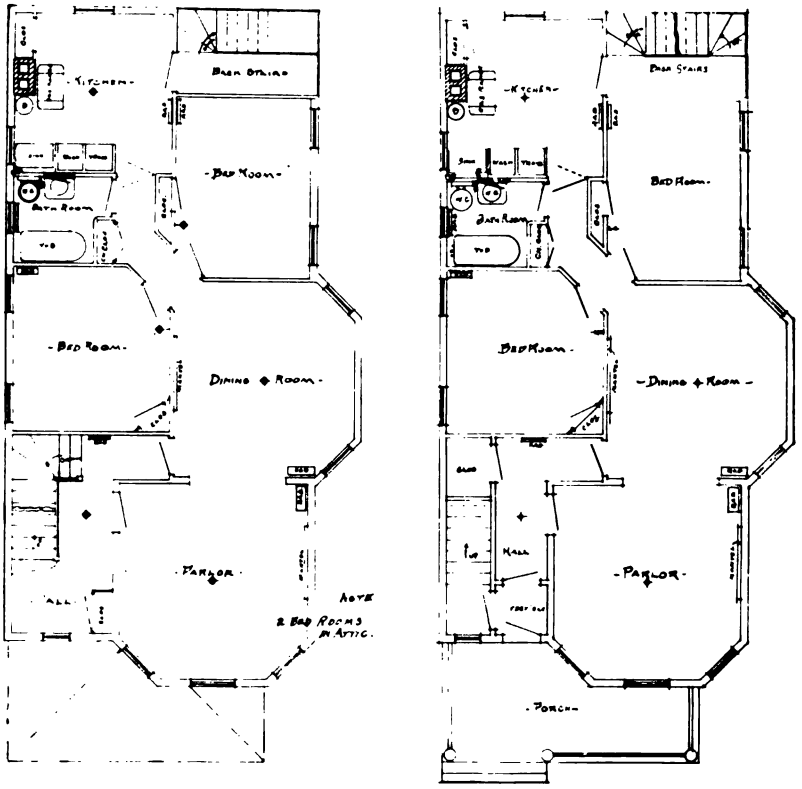
TWO FAMILY HOUSE, ST. CATHERINES, ONT., CAN.

A. E. Nicholson, O. A. A., Architect.



TWO FAMILY HOUSE, EL PASO, TEX.

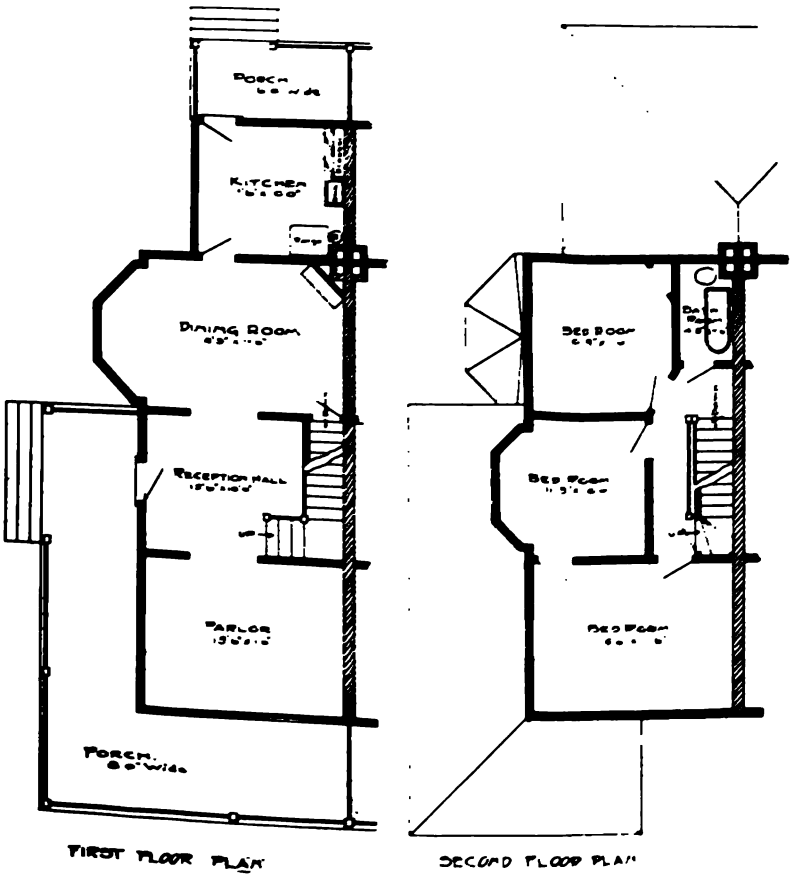
A. F. Miller, Architect.



TYPICAL PLANS OF TWO FAMILY HOUSES ON MT. PROSPECT AVENUE, NEWARK, N. J.

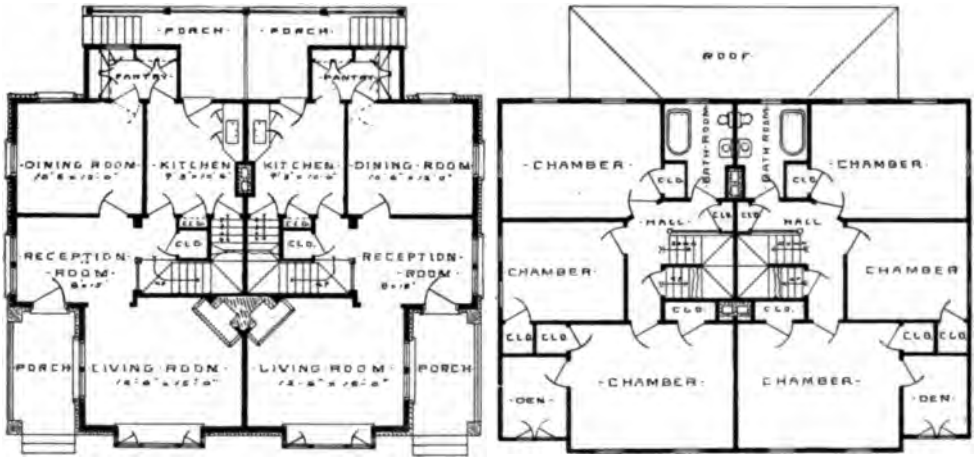
Lowy & Berger, Owners. **Henry Baechlin, Architect.**

TWO FAMILY HOUSES, NEWARK, N. J.



TWIN HOUSE.

C. E. Schermerhorn, Architect.



— FIRST - FLOOR - PLAN — — SECOND - FLOOR - PLAN —

TWIN HOUSE FOR HENRY H. HAGAR, BURLINGTON, VT.

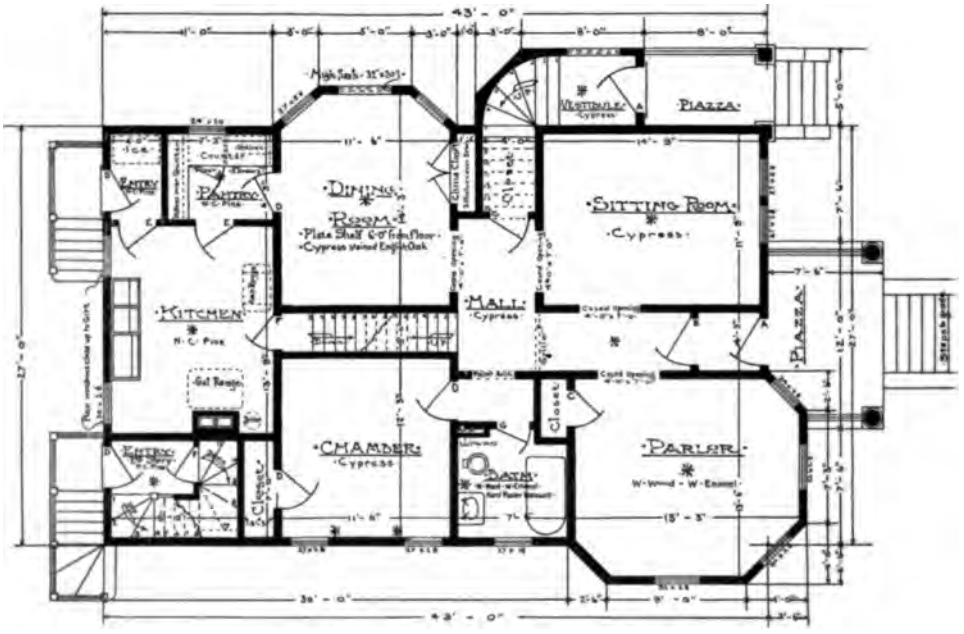
Frank Lyman Austin, Architect.

FIRST-FLOOR PLAN-

-SECOND-FLOOR-PLAN-

"THE GABLES," A TWO FAMILY HOUSE ERECTED FOR HARRY S. HOWARD, BURLINGTON, VT.

Frank Lyman Austin, Architect.

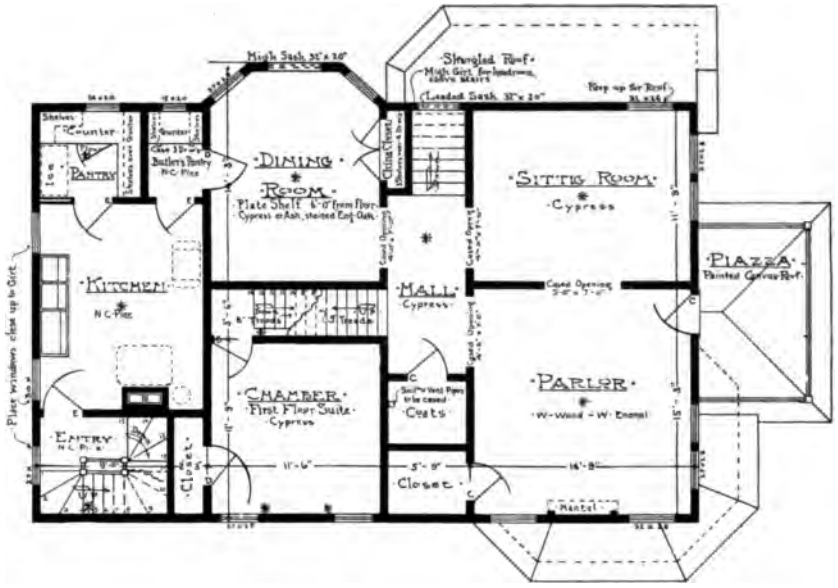


FIRST FLOOR.

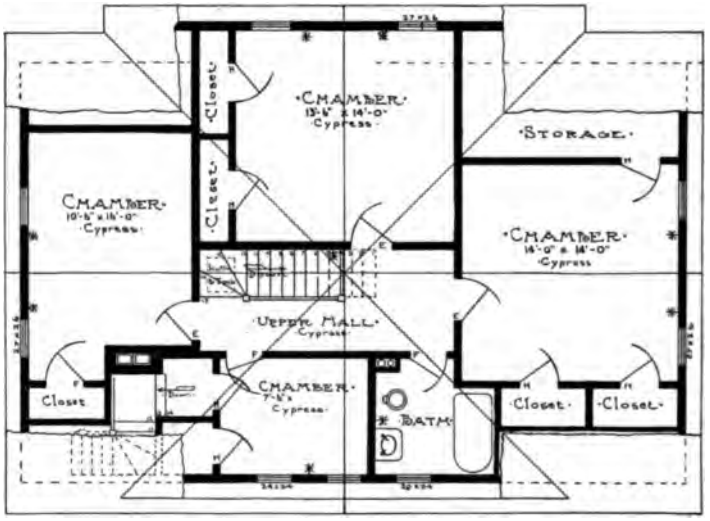
TWO FAMILY HOUSE, BOSTON, MASS.

Jas. T. Ball, Architect.

(See next page for second and third floors.)



SECOND FLOOR.



THIRD FLOOR.

TWO FAMILY HOUSE.

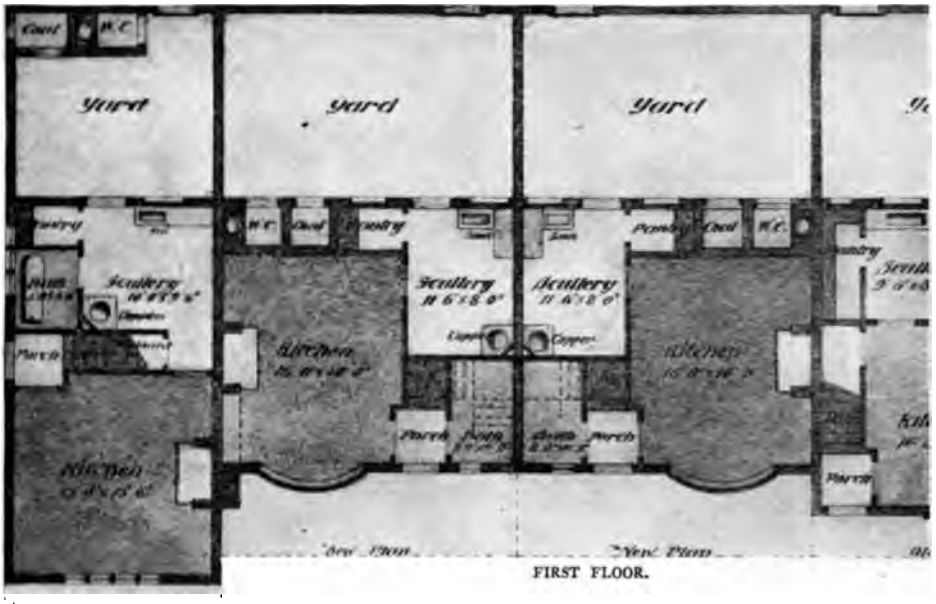
Jas. T. Ball, Architect.

(See last page for view and first floor plan.)

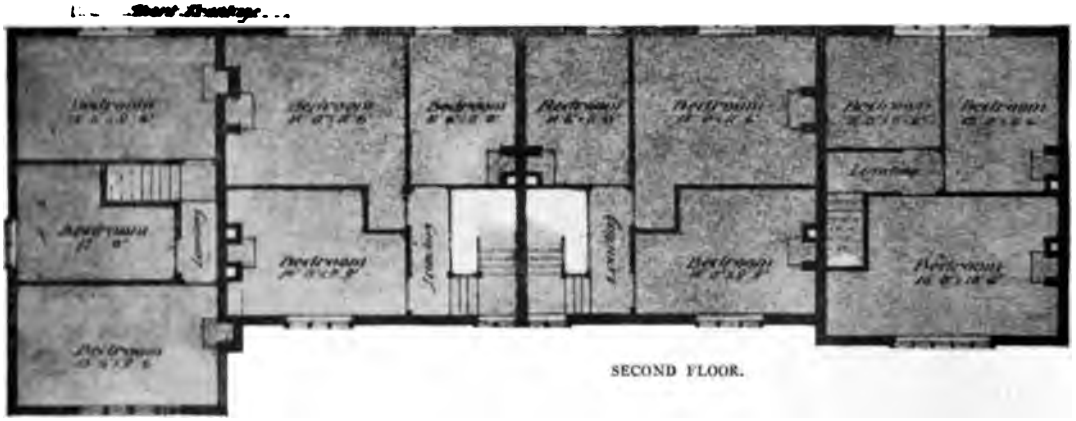
FIRST FLOOR. SECOND FLOOR.

TWO FAMILY HOUSE, WATERBURY, CONN.

E. E. Benedict, Architect.

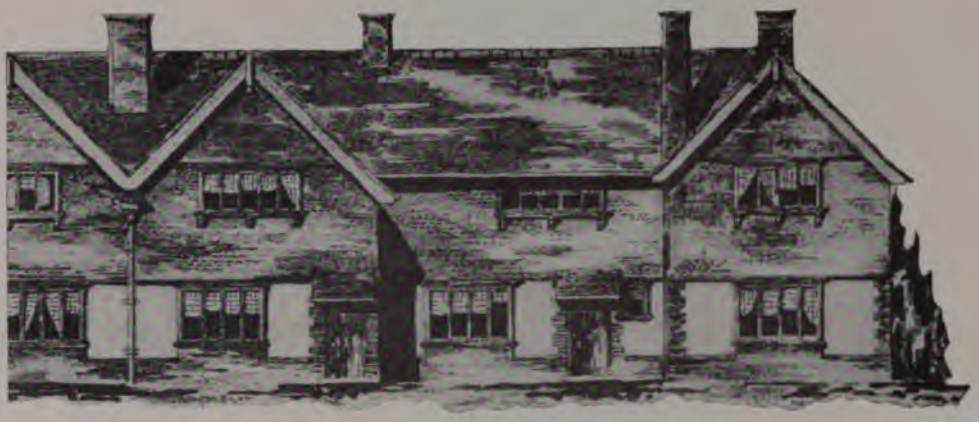


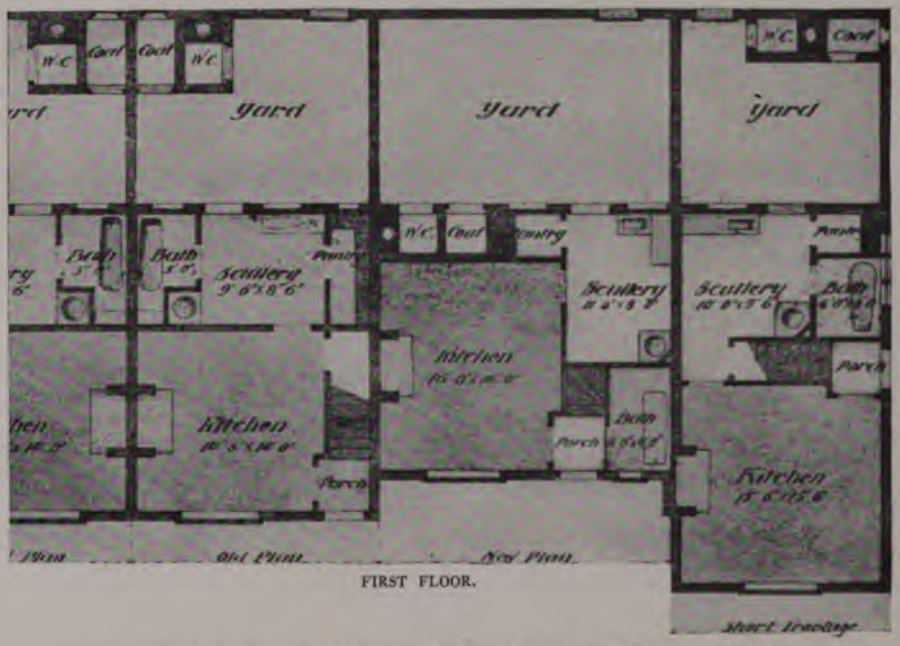
FIRST FLOOR.



SECOND FLOOR.

BLOCK OF SEVEN COTTAGES, PORT SUNLIGHT, ENG.
Wilson & Talbot, Architects.

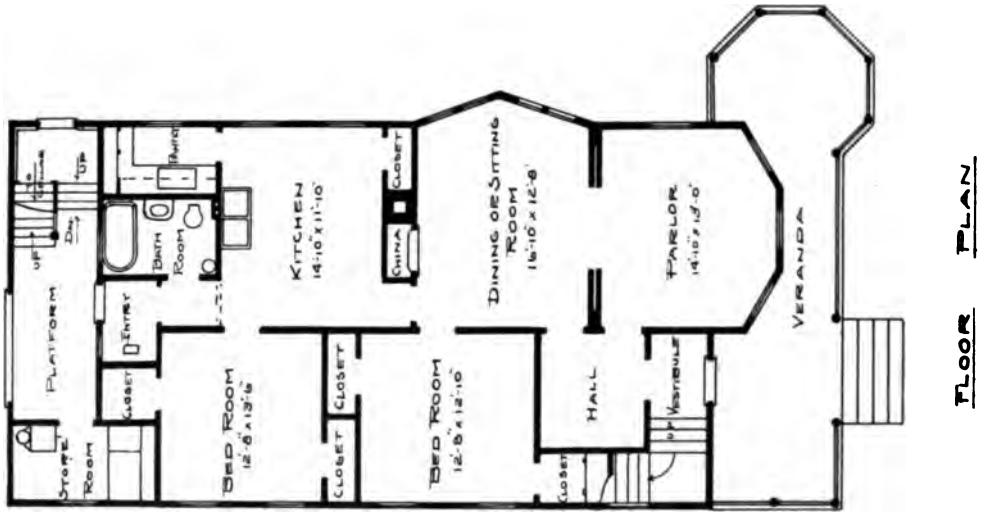




FIRST FLOOR.

BLOCK OF SEVEN COTTAGES, PORT SUNLIGHT, ENG.

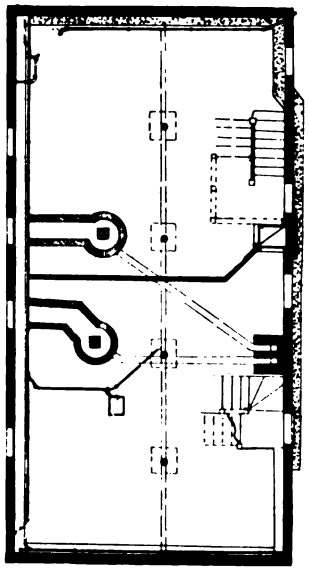
Wilson & Talbot, Architects.



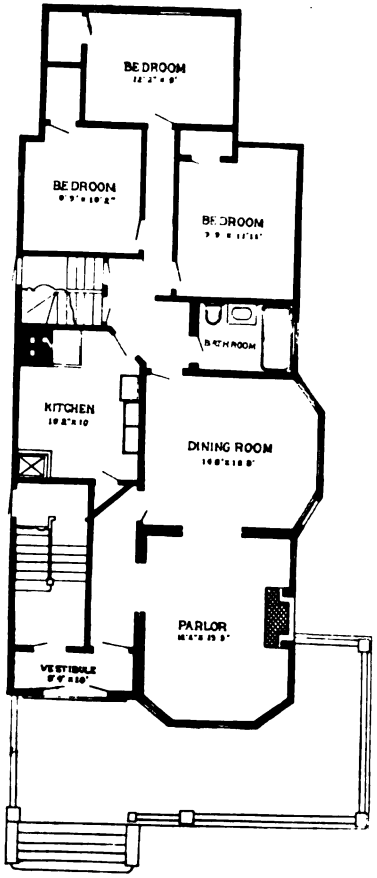
FIRST FLOOR.

THREE FAMILY HOUSE.

John P. Kingston, Architect.

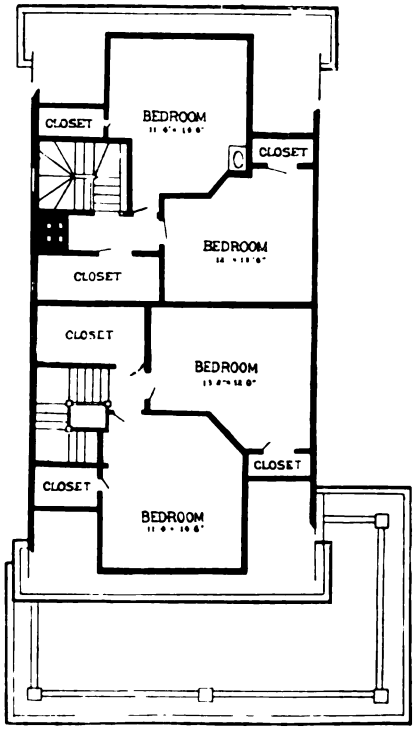


CELLAR PLAN.



FIRST FLOOR.

SECOND FLOOR.



ATTIC PLAN.

TWO FAMILY HOUSE, 57 TURNER PLACE, BROOKLYN, N. Y.

Owner, W. M. Taylor. J. S. Kennedy, Architect.

EXTERIOR VIEW.

PARLOR.

TWO FAMILY HOUSE, 57 TURNER PLACE, BROOKLYN, N. Y.

Owner, W. M. Taylor. J. S. Kennedy, Architect.

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